A PRACTICAL INTRODUCTION TO PSYCHIATRY

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by

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PREFACE

I have written this book for medical students. I have tried to make it simple because the elements of psychiatry are simple and easy to understand. In order to give a bird's-eye view of the subject I have omitted much which the interested student can find for himself in the standard textbooks.

I wish to thank Drs. E. Marley and R. T. C. Pratt for their helpful advice and criticism.

C. M. B. Pare

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INTRODUCTION

Definition

Psychiatry is that branch of medicine which aims at the treatment of mental ill-health. It is often confused with psychology which means "study of the mind". Psychology is not primarily aimed at treatment and psychologists are usually not medically qualified.

Historical

Although Hippocrates had taught that the brain was the seat of the mind, had described temperaments influenced by bodily humours and had rejected a supernatural cause for epilepsy, metaphysical causes for insanity were accepted until comparatively recently. Insane persons were thought to be possessed by evil spirits and thus treatment was considered the province of the Church. Therapy varied from exorcism by prayer and long readings from the Bible, to methods designed to make the body so uncomfortable that the evil spirits would depart. In the last instance the subject was burnt as a witch or sorcerer and this was considered therapeutic if the demon could be seen escaping from the body as it burnt.

In the seventeenth and eighteenth centuries doctors gradually took over the care of the insane but treatment remained harsh. King George III was treated with flagellation, and patients in asylums were often kept in chains in the most appalling conditions.

Philippe Pinel (1792) introduced the humanitarian approach to the management of the mentally ill, and his reforms were adopted in England by William Tuke at the York Retreat. A large number of hospitals were built for the care of the mentally ill but management was essentially custodial and the hospitals were situated a considerable distance from the cities showing the moral disfavour with which mental illness was still considered.

EVOLUTION OF MODERN PSYCHIATRIC THOUGHT

Classification

In 1882 Kraepelin introduced his classification of mental disorders and brought order to a hitherto chaotic subject. By emphasising the features held in common, he brought together the apparently heterogeneous illnesses which are now known as schizophrenia and by long-term study showed that the apparently contrasting conditions of mania and melancholia were phases of the same illness, manic-depressive psychosis. It is this separation of the major psychoses into distinct groupings which has allowed the considerable genetical, biochemical and psychological research upon which we are dependent for advances in ætiology and treatment.

Psychobiology

The school of psychobiology, founded in the U.S.A. by Adolph Meyer (1866–1950), emphasised the importance of understanding the patient as an individual and his illness was interpreted as a reaction of his particular personality to various stressful events.

This approach has had a big influence among psychiatrists as it is essentially realistic and testable. Thus, a detailed life-history may show that a patient is particularly vulnerable to a certain type of stress. Such stresses may be physical or psychogenic, but in either event steps can be taken to avoid or minimise the stress and, by physical or psychotherapeutic measures, increase the patient's capacity to overcome it.

However, by emphasising the uniqueness of the individual, Meyer went to the opposite extreme of ignoring the similarities between groups of patients and the influence of hereditary factors.

Psychoanalysis

About the same time, Sigmund Freud (1856–1939), and his colleagues, Carl Jung and Alfred Adler, initiated a trend away from the traditional concepts of mental illness as a disease process, in favour of viewing such illnesses in a more dynamic way, in terms of a reaction, conscious or unconscious, to events past or present. Freud visualised the personality in three parts:

The *id* is the collective name for the primitive biological and aggressive impulses. It is derived from the instincts and provides the individual's general energy and drives.

The *ego* is that part of the personality which is responsible for the individual's adjustment to life. It is the consciously controlling part of the personality and directs behaviour into acceptable compromises between the blind drives of the *id* and the inhibitions of the *super-ego*. The more mature the personality, the stronger is the *ego*.

The *super-ego* represents the conscience and the prohibiting and censoring elements of the personality. It acts by creating anxiety and guilt if the *ego* accepts impulses from the repressed part of the *id*.

In the well-adjusted individual, the behaviour successfully and simultaneously meets the demands of the id, the ego and the super-ego.

Freud taught that emotional stresses occurring in infancy or childhood may result in failure of normal personality development. His ideas gave rise to the form of treatment called psychoanalysis which aims at allowing the patient to recall significant emotional upsets and with the aid of the analyst surmount the block in personality development which resulted from these.

The therapeutic possibilities raised by analytic theory undoubtedly contributed to the enthusiasm with which many people took it up. The popular idea that there is an emotional "cause" for a particular disorder and that, if this can be found the disorder can be cured, is an attractive one. However, this simple concept is far from the truth and, if there is an emotional "cause" for a particular disorder, this is usually a series of many incidents rather than one particular event. In practice, psychoanalysis is only applicable to very selected neurotics and the results are disappointing. This is not really surprising. The theory behind it is not a scientific one and the postulation of mutually opposed forces will enable one to explain phenomena of any kind. Thus testing of the theory, upon which progress must depend, is very difficult.

Although there are many aspects of Freud's teaching which can be criticised, and modern adherents of his school have modified many of his more extreme views, there is no doubt as to the contribution which he has made. In particular, his concept of unconscious mental life, its predominantly emotional and non-rational nature, and its significance in motivation represented a revolutionary advance.

Pavlovian School

Pavlov (1849–1936) was a physiologist who became interested in the way and the extent to which physiological processes might be influenced by psychic stimuli.

In Pavlov's view, the life of an animal is a series of adaptations to conditioning through the formation of new conditioned reflexes and the extinction of older ones, a balancing of excitatory and inhibitory processes and the adaptation of these to the external world. According to this view, consciousness plays the dominant role in man's psychic life and in this respect he is completely at variance with the psychoanalytic schools. Pavlov also came to the conclusion that the differences between individuals occurred as the result of differences in the accumulated acquired characteristics. These include variations in the force of excitation and inhibition, the equilibrium between these forces and their mobility, so that four main types of temperament can be distinguished: The weak inhibitory, the quiet equilibrated, the lively equilibrated and the strong excitable. Pavlovian psychiatry considers that mental breakdown is more probable in the extreme types, the weak inhibitory and the strong excitable.

Following Pavlov, Eysenck has postulated that extroverted behaviour patterns are due to the production of strong inhibitory and weak excitatory potentials, while introverted behaviour patterns are due to weak inhibitory and strong excitatory potentials. Thus, it should follow that extroverts and hysterics should be more difficult to condition than introverts and anxious and obsessional neurotics and, indeed, there is considerable experimental evidence confirming this. Recently, conditioning methods have been introduced in the treatment of selected neurotic and behavioural disorders with some success.

Biochemical Approach

Whereas psychoanalysis and psychobiology have contributed to the understanding of individual differences, both ignored or almost ignored the hereditary and constitutional aspects.

It will be seen later that patients developing schizophrenic or depressive illnesses frequently show evidence of having been predisposed to that particular illness and that this predisposition has been inherited. Genes are organic chemicals and are thought to act via enzyme systems, abnormality of a gene resulting in a defective enzyme; the one gene, one enzyme theory. Thus, far from leading to an attitude of therapeutic nihilism, the fact that predisposition to an illness is inherited and transmitted by one specific gene, raises the hope of finding a specific biochemical abnormality which might then be treated pharmacologically. In the last ten years, research into a biochemical cause for schizophrenia and depressive illnesses has increased enormously and has led to big advances in pharmacological methods of treatment.

PRESENT POSITION OF PSYCHIATRY

Incidence of Mental Ill-health

The patients who come under psychiatric care range from those who are so ill that they require hospitalisation, through those who are less disabled but whose condition gives rise to considerable subjective discomfort and social inefficiency, to the "social problem group" of delinquents, drunkards and inadequates. Many of these conditions are social rather than medical problems yet, because these social problems are frequently bound up with disorders of personality, the psychiatrist is often best equipped to deal with them.

The amount of mental ill-health is enormous. Psychiatric patients fill over 40% of all the hospital beds in Great Britain. Psychiatric problems accounted for 25% of all invalidings from the Services in World War II and one investigation suggested that they account for between one-third and one-quarter of all sickness in industry. Estimates of the incidence of psychiatric disorder in general practice vary, depending on the stringency of the criteria used, but the Council of the College of General Practitioners suggest that in 30% of patients attending their family doctor, the disability is primarily psychiatric.

Attitude of the Layman

Since the last war, public as well as medical opinion has changed considerably in its attitude to mental illness. There has developed a willingness to confront psychiatric illness as a medical problem, to increase psychiatric services in general hospitals and to tolerate mentally disabled persons in the community. This changing attitude is reflected in the statutory provisions for the mentally ill. Before the opening of the Maudsley Hospital in 1923 only private mental hospitals were allowed to take voluntary patients in addition to those under certificate. It was not until 1930 that Public Authorities in England were allowed to provide treatment on a voluntary basis. Meanwhile certification was a judicial procedure and was carried out by a magistrate with all the formality which this entails. The Mental Health Act of 1959 brought the law into line with public and medical opinion. Psychiatric patients may now be admitted to any hospital without legal formality, just as is the case with any other sick person. If, however, compulsory detention is necessary for observation or treatment, this is now entirely a matter between the patient's medical advisers and his nearest relative. (See Appendix 2.)

Mental illness is still not free from a moral stigma, however, and this in itself increases the difficulties which face a psychologically ill patient. The idea that psychiatric patients are unwilling to face life and that their illness is a flight from reality is quite wrong in the majority of cases. Equally false is the notion that psychiatrists frown on discipline.

Ethics in Psychiatry

To quote Sir Aubrey Lewis, the doctor's aim should be:

(1) To regard the removal of symptoms as a good thing, but the maintenance of normal social adaptation as far better. It is bad to get rid of one symptom only to see it replaced by another, but much worse to get rid of all symptoms only to see the patient at the end of treatment a dependent and introspective hypochondriac, a social invalid.

(2) To seek for the psychological cause of the patient's illness only to the extent that the patient's wellbeing demands, which is often far short of what one's own interest and psychological curiosity would demand.

(3) To consider carefully whether any shock to the patient, any aggravation one produces in his illness even temporarily, may be a sign of bad treatment.

(4) To be satisfied with the patient's recovery, and not to aim at his promotion to a state of ideal mental health and self-understanding. It is better that treatment should be quick and effective than drawn out to meet theoretical standards.

(5) To understand the development of the patient's illness, and to interpret it both to him and to oneself, in terms of real experience rather than of hypothetical forces.

(6) To treat the patient without allowing one's own emotions to be more concerned in the course and outcome of the treatment than is usual in the treatment of a physical illness.

(7) To aim at harmonising the patient's mental life by giving his ill-managed energies fitter material to work at, and release from the burdens laid on them by past experience.

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Chapter 1

THE ÆTIOLOGY OF PSYCHIATRIC DISORDERS

Psychiatric disorders which first present in adult life are: personality disorders, psychiatric illnesses, and those associated with organic disorders of the central nervous system. (Table 1.)

TABLE I. Classification of Psychiatric Disorders

A. *Personality Disorders*	
1. Psychoneuroses	Obsessional neuroses Hysteria Anxiety states Neurasthenia Hypochondriasis
2. Psychopathic Personality	Passive and inadequate Aggressive Creative
3. Addiction to Alcohol and Drugs	
4. Sexual Anomalies	(e.g. homosexuality, transvestitism, exhibitionism)
B. *Psychiatric Illnesses*	
1. Affective illnesses	Depression Mania
2. Schizophrenia (including paraphrenia)	
C. *Organic Disorders of the Central Nervous System*	
1. Intoxications (alcohol, morphine, bromide, etc.)	
2. Infections and Exhaustive Disorders	
3. Metabolic, Endocrine and Visceral Disorders (Diabetes, pernicious anæmia, pellagra, exophthalmic goitre, myxœdema, cardiac disease, uræmia, etc.)	
4. Syphilis of the Central Nervous System	
5. Other Cerebral Diseases (Disseminated sclerosis, cerebral tumour, cerebral trauma, epilepsy, etc.)	
6. Degenerative and Hereditary Brain Disease (Senile dementia, cerebral arterial disease and hypertension, Huntington's chorea)	
D. *Psychiatric Disorders in Childhood*	
E. *Mental Deficiency*	

The personality disorders are those where the type and severity of symptoms correlate quantitatively with the patient's previous personality and the stresses to which he is exposed.

The more susceptible the personality, the less severe the stressful factors need be to cause a breakdown and vice versa. Furthermore, given a certain personality, the greater the stress, the more severe will be the symptoms. Personality disorders include the psychoneuroses and psychopathic personality disorders, and most cases of alcoholism and drug addiction. Homosexuality, being an intrinsic personality disorder, is also included in this group.

In a psychiatric illness, the disturbance is probably a biochemical one, to which the patient is genetically predisposed and which may be precipitated by some stressful event. The severity of the symptoms, however, are out of proportion to the precipitating stress and the illness may continue on its own course even though the stress is removed. Schizophrenia and affective illnesses fall into this group.

Organic disorders of the central nervous system usually result in a characteristic "organic" mental state. However, by affecting the intellectual and other aspects of the patient's personality, the organic disorder may lessen the patient's capacity to cope with life and so result in the production of neurotic symptoms.

Thus when a patient develops psychiatric symptoms in response to stress, the doctor has to decide whether the premorbid personality is of the type which would be expected to break down under this stress and whether the severity of the symptoms is proportionate to the degree of stress in that particular individual. If not, he must look hard for some additional factor such as genetic predisposition, or an organic disorder which may have lessened the patient's previous capacity to cope. Assessment of the ætiology of a psychiatric disorder depends, therefore, on an intimate knowledge of the patient's previous personality and the stresses to which he is exposed.

PERSONALITY

A. *Definition*

Personality is the more or less stable and enduring organisation of a person's character, temperament, intellect and physique which determines his unique adjustment to the environment. (Eysenck)

B. *Structure*

The four main sectors into which behaviour patterns are organised are as follows:

Character denotes a person's more or less stable and enduring system of conative behaviour. This is the striving or urge of the personality for expression. Conation lacks the degree of consciousness which we usually associate with the idea of will or volition, since the individual may not recognise the instinctive and emotional sources from which his action was prompted.

Temperament refers to the characteristic phenomena of an individual's emotional nature, including his susceptibility to emotional stimulation, his customary strength and speed of response, the quality of his prevailing mood and all the peculiarities of fluctuation and intensity in mood.

Intellect is used here to denote cognition and covers all the various modes of knowing—perceiving, remembering, imagining, conceiving, judging and reasoning. *Intelligence* is an integral part of cognition. The potential is inherited, but its development depends on the child's upbringing, and education and other opportunities. Further, the application of intelligence depends on other personality factors. A stable driving man with an I.Q. only slightly above average is frequently far more effective than a potentially more intelligent person who, perhaps because of neurotic traits, is unable to utilise his intelligence to the full. It is by ignoring the fact that intelligence is only one part of the personality that I.Q. testing has been brought into some disrepute.

Physique refers to the bodily configuration and neuro-endocrine endowment.

C. *Heredity*

The basic ingredients of an individual's personality are inherited. The inheritance is a multifactorial one, which means that many genes are concerned, the genes not only acting independently but exerting their effect on one or several other genes in a modifying role. The importance of heredity in personality development has been demonstrated by twin studies. Thus, uniovular twins, separated at an early age and brought up by mothers of quite different character, often showed significant similarity in important aspects of personality. In another study, Eysenck investigated intelligence, autonomic lability and extraversion/introversion in 52 pairs of twins. There was a significant difference in all these factors between groups of uniovular and binovular twins.

D. *Development of the Personality*

Personality endowments are inherited and these are moulded by a child's upbringing and experience until by adult life he has a well established personality. Obviously as a child one is much more impressionable than at any other time, and this period is of particular importance in personality development. The home background and parental attitudes, especially that of the mother, have a lasting effect on how a person copes with life. The more stable and happy the home and the more consistent the affection which the child receives, the more secure he will feel. If the home is unhappy and affection lacking or inconsistent, the child tends to feel insecure and to develop an anxious personality. Later, identification with one or other of the parents should be a normal feature of development. Brothers and sisters provide the first real threat to a child's relations with its parents and, if insecure, the child will feel he has to compete with his sib for parental affection. This may give rise to a competitive striving for success to outshine his rival in matters (e.g. school) of importance to the parents; or, on the other hand, he might withdraw from the fray and adopt an indifference to such scholastic endeavours. Such early influences may lead to the development of an aggressive, ambitious personality in future life, or to a modest and retiring one. Although childhood is the time of greatest plasticity, the individual is continually affected by experience throughout life, though adaptation becomes less effective after adolescence and by the end of the third decade any personality development is usually small.

E. *Mental Mechanisms*

No-one is completely equipped to deal easily with all the various difficulties of life and a healthy life depends on an ability to adjust to, or overcome, them by making the most of one's assets and covering up one's deficiencies, conflicts and objectionable impulses. Some of the mechanisms by which this is done are as follows:

1. *Repression.* This is the exclusion from consciousness of memories and feelings which are irreconcilable with the image we have of ourselves. It is one of the commonest mental mechanisms. Even though unconscious, these feelings may exert their effect and when certain ideas become overcharged with emotional accompaniments, this is called a *Complex*. When there is a marked disproportion between stimulus and mental reaction as with a prejudice it suggests that the latter may be complex-conditioned.

2. *Sublimation.* Here conflicting drives and desires are transferred and directed into socially acceptable interests. Thus aggression may be directed into competitive games or, later, into creditable ambition.

3. *Compensation.* By this mechanism the person attempts to cover up his inadequacies and secure the recognition for which he craves. Thus real or imagined inferiority may lead to showing off and men of short stature may compensate by aggressive behaviour.

4. *Reaction Formation.* The patient develops a character trait usually the exact opposite of that which would naturally follow from the expression of the unfettered tendencies. Perfectionist and uncompromising character traits are often based on a reaction to some unconscious impulse; for instance, the prudery of an old maid may be a reaction to suppressed sexual desires.

5. *Rationalisation* is another means of self-deception by finding satisfactory and socially acceptable reasons for behaviour which is really caused by less worthy motives.

6. *Projection.* Here the person directs outwards and attributes to others his own disclaimed and objectionable traits and desires.

7. *Displacement* is the changing of emotional feeling from one object to another as a means of disguising or avoiding unacceptable ideas and tendencies. This gives rise to apparently irrational and meaningless fears.

F. *Specific Genetic Factors*

In addition to the usual multifactorial inheritance, which together with the child's upbringing and life experiences leads to the individual's make-up, the patient may inherit a specific predisposition to a particular psychiatric illness. These are in the nature of true illnesses rather than a reaction to events, though the illness in itself may result in the personality being unable to cope with the environment and lead to secondary "neurotic" symptoms. The two major illnesses in this category are the affective illnesses (disturbances of the emotions) and schizophrenia. In both these cases there is often a family history of the specific disorder and the patient inherits a predisposition to the illness. The illness may never manifest itself, may develop only after a precipitating stress or may come on recurrently for no apparent reason. This depends on the degree of predisposition and other aspects of the personality; the better adjusted the patient, the less likely is the illness to manifest itself. Frequently evidence of such a predisposition may be found in the patient's premorbid personality. A depressive or hypomanic temperament, cyclothymic and spontaneous mood swings, or an excessively labile affect may be present in patients predisposed to affective disorders. Such patients are frequently of a pyknic body build. Less frequently a paranoid or schizoid temperament may be present in patients who later develop schizophrenia, and such patients tend towards an asthenic somatotype.

G. *Personality Types*

1. *General Classification.* Although every patient is unique, classification is essential in medicine, as in any other science. It is only in this way that past experience can be used to make predictions for future testing.

Personality can be classified into various types and, in general, the more extreme the personality type, the more precarious the adjustment and the more likely is the patient to break down under stress. Furthermore, if the patient does develop a neurotic disorder, this is likely to be of a type which could be predicted from his previous personality traits.

The main typology is one of *extraversion/introversion.* Every individual possesses both the mechanisms of introversion and that of extraversion, and it is only the relative strength of the one as compared with the other which creates the type. Eysenck describes a markedly extroverted individual as one who values the outer world, both in its material and in its immaterial aspects (power and prestige), he seeks for social approval and tends to conform to the mores of his society. He is sociable, makes friends easily and trusts other people. He shows outward physical activity whereas the introvert's activity is mainly in the mental, intellectual sphere. He is changeable, likes new things, new people and new impressions. His emotions are easily aroused, but never very deeply. He is relatively insensitive, impersonal, experimental, materialistic and tough-minded. He tends to be free from inhibitions, carefree and ascendant. Into this primary classification more precise personality types can be arranged. Thus, introverted individuals may be anxious, obsessional or neurasthenic, and if neurotic symptoms develop, they will tend to be those of an anxiety or obsessional neurosis or neurasthenia. Similarly, extraverted individuals may be of a psychopathic or hysterical type.

2. *Study of the Individual Patient.* By taking a life history the doctor assesses the patient's intelligence, stability of mood, drive, ambition, rigidity, ability to form relations with other

people, etc. At the same time, he assesses the ability of the patient to adjust to the many stresses and strains to which he has been subjected throughout his life, notes carefully the type of stress to which he seems to have most difficulty in adjusting, and observes his mode of reaction and any behavioural or other symptoms which result.

This method is especially important in assessing the type of stress to which the patient is particularly susceptible and to ascertain individual factors which may influence either the symptomatology of any manifest illness or the more actuarial prognosis derived from experience of other patients.

STRESS FACTORS—PHYSICAL, ENDOCRINE AND PSYCHOGENIC

Physical Stress

1. *Physiological.* Into this category fall such factors as lack of sleep, physical tiredness from overwork, and loss of weight. Only in the most susceptible patients will such factors be sufficient to precipitate a breakdown by themselves. However, they are frequent concomitants, not only of other stressors, but also of the psychiatric disorder itself. Correction of these factors may prevent the occurrence of a psychiatric disorder and certainly, if one is already manifest, will lead to improvement in the patient's condition.

2. *Pathological.* (*a*) *Surgical operations and childbirth.* Childbirth has been included with surgical operations, rather than under endocrine changes, as the psychiatric concomitants are so similar. In actual fact, minor psychiatric disturbances are almost usual following childbirth and major breakdowns commoner than after surgical operations. This may be construed as resulting from the associated endocrine changes or perhaps even from the accompanying emotional tension of having a baby. Both surgical operations and childbirth are common precipitants of a major psychiatric illness. This usually develops at the end of the second week post op./p.p. and in general is not associated with the anæsthetic or the

occurrence of sepsis or other complications. The situation with operation for cataract is different in that it is usually carried out in elderly patients and the sudden transfer to hospital, the operation, and the post-operative blindness from the dressings cause acute anxiety. Anxiety, often caused by strange voices, a general unawareness of what is happening, added to an elderly patient's difficulty to adjust, can be prevented by allowing a few days for the patient to get to know the ward and nurses prior to operation, and it is advisable for a nurse he knows to attend to him post-operatively and explain what is happening. A similar rationale is behind the course of ante-natal instruction to primigravidæ and should illustrate the importance of an appropriate explanation to all patients undergoing surgical operations.

(*b*) *General medical disorders.* Depression frequently follows influenza and glandular fever and must be recognised for what it is, rather than attributing it to a lessening continuance of the illness itself. Similar effects may occur following any debilitating illness. The significance of other disorders will depend on the patient's circumstances in life and his previous personality. Thus, a relatively minor osteo-arthritis of the hip may render a postman incapable of coping with life and precipitate psychiatric symptoms. Similarly, a patient may be particularly susceptible, psychogenically, to physical disorders, either of a general or specific type. This may be due to a hypochondriacal personality, to a specific traumatic medical experience, or particularly in old age, to the increase in social isolation to which physical disability so often leads.

(*c*) *Organic disorders of the Central Nervous System.* Disorders such as dementia, space occupying lesions, and vitamin deficiency (e.g. vitamin B_{12}) usually present as a typical "organic" mental state. However, the patient may present with "functional" symptoms, brought about indirectly by the organic disorder. A brain tumour, by detracting from a patient's efficiency and ability to cope with his work may lead to the formation of neurotic symptoms. Thus a previously stable patient who presents in middle or late age with hysterical or other neurotic symptoms should not be dismissed as a hysteric. Rather, a reason should be sought for the appearance of a hysterical symptom in a previously stable personality.

Endocrine Stress

Endocrine changes are important in the consideration of psychiatric disorders and this is especially so in affective illnesses, which are extremely rare before puberty. There is a steady increase in incidence after adolescence, which reaches a peak at the menopausal period of life or its equivalent in men. Other psychiatric disorders show a similar, though less marked, increase in incidence at the menopause.

These endocrine changes frequently coincide with psychogenic difficulties, when the stresses may be additive. Thus the endocrine changes of puberty and adolescence occur at a particularly difficult period of adjustment, and the changes of the climacteric often occur when the children are growing up and the whole outlook of the woman's life is changing. Similarly in the involutional and senile period of life bereavements may occur, loneliness may be feared, and physical illness and dependence on others may lead to a feeling of becoming a burden.

In addition to these pronounced endocrine changes associated with difficult age periods, the regular disturbances associated with the menstrual cycle are frequently associated with changes in the mental state. Apart from the common syndrome of premenstrual tension, this phase of the cycle is often associated with exacerbations in an established psychiatric illness or may result in the regular occurrence of mild symptoms in a predisposed individual. In this connection, striking statistical confirmation has been provided by the study of post mortem material. Of 102 post mortems, when death had resulted from suicide, accident, and a variety of diseases, 89 of the patients died during the luteal phase and only 13 during the first half of the menstrual cycle. Similar findings have been found in relation to poor school work and behaviour, accidents and crime.

Psychogenic Stress

1. *Non-specific.* By non-specific is meant any stress of an emotional type which affects the patient to a degree which would be expected in other people of his age, sex, and station in life. Such non-specific stresses rarely lead to psychiatric disorder unless of a cumulative nature. This, however, is not unusual. Stresses accumulating over the years tend to be ignored, attention being focused on the final "straw" or withdrawal of some support which led to the manifestation of symptoms. Thus the effect of long standing worry at work, domestic disharmony or the burden of bringing up a family in unsuitable conditions, may remain unrecognised until a bereavement or physical illness precipitates a psychiatric disorder. In such cases it is important to recognise the role which non-specific psychogenic factors play, otherwise the course of the illness may be prolonged with the likelihood of further breakdown in response to stress.

2. *Specific.* By this is meant those stresses which are particularly upsetting to the individual, either because of his personal make-up or his life experiences. Change to a disorganised and ill-defined type of work may be acutely distressing to the obsessional patient; promotion to a job of responsibility disastrous to an over-dependent person or one of only average intelligence, while a lonely hermit-like existence, which would be anathema to an extraverted person, may be easily tolerated by a schizoid. The reason for this sensitivity to a particular type of stress may be understood only after a full assessment of the patient's personality and development. Confirmation that this type of stress is particularly upsetting should then be obtained by taking a detailed life history and noting that all stresses having this specific factor in common, result in the patient's reacting more markedly than in response to other events.

Since specific factors are so important for an understanding of many psychiatric disorders, some time will be spent describing the commonest of them by way of illustration.

"ISOLATION"

Man is a gregarious species and the most stressful events are those relating to another person. Probably the greatest stress is a feeling of isolation, and this may be "*true*" or "*subjective*". Epidemiologically it has been shown that the incidence of suicide is correlated with social isolation but not with poverty, social class, or other material hardship. Suicide is common in the rooming house areas of London, but infrequent in the East End where family and other social ties are close. Similarly, suicide is much commoner in the elderly, when retirement, bereavement, and physical disabilities increase social isolation and prognosis in depressive illnesses of old age correlates highly with the degree of family integration outside hospital. Thus epidemiological, as well as clinical, evidence stresses the importance of personal relationships. This feeling of having someone to rely on, though particularly important on an individual basis, also occurs in families and even communities and nations, a lack of unity and common purpose leading to a "sick society". The importance of morale in the prevention of sickness in the Army is well-known and recently industrial organisations have been spending vast sums on fostering a sense of unity in their employees, in an effort to raise the standard of work and decrease strikes and absenteeism.

Having established the importance of *true* social isolation in the ætiology of psychiatric disorders, one can infer the importance of relative or *subjective* isolation which is much the most common type in younger age groups. This subjective type of isolation is a feeling that, either because no-one understands them or has enough affection for them, they have no-one on whom they can really depend without a fear of being rejected and let down. Having someone to turn to is, of course, quite different from being dependent on someone and, in fact, enhances a person's self confidence.

Ætiology of "Isolation"

The difficulties in a child's life are just as real as those he faces when an adult. It is in childhood, however, that the individual first learns how to tackle life. Ideally, if a child bumps his head against a door, his mother will pick him up, kiss his head better and in her arms protect him from outside worries. With a consistent and demonstrative mother, the child learns to face life confidently and free from anxiety. Later, he will bump his head and rub it better himself, knowing that if he wished his mother would come to the rescue. The child with an undemonstrative or inconsistent mother cannot depend on her and is, to a greater or lesser extent, insecure. Some of these children become attention-seeking and others withdrawn, independent, "model" children—perhaps not seeking help for fear of rejection. It is in this respect, I believe, that disturbed homes, either due to death or separation of a parent, or simply quarrelling within the family, may be harmful in early childhood. Obviously children change with later experiences, but there is always a tendency for children who have been unable to have confidence in their mother's affection and dependability, to lack trust and confidence in others and to be over-sensitive to any suggestion of rejection or loss of affection.

Manifestation of "Isolation"

The greatest support a person has is a feeling that there is someone to whom he can turn for help if necessary without fear of being rejected. This confidence in others leads to a sense of security and self-confidence. Individuals without this are insecure, lack inner confidence and are particularly sensitive to slights, criticisms and let-downs from others and especially from those to whom they are close. In fact they rarely make really satisfactory relationships with other people. The normal shyness of adolescence is accentuated and in all relationships there is an expectancy that they might be let down. Small events are misconstrued and the loss of a friend or separation is taken keenly. Marriages tend to be less close than normal and the individual may be either over-possessive or apparently aloof and unconcerned. Sexual difficulties are usually a concomitant of a more fundamental disharmony. Thus a frigid hysteric is egocentric and unable to develop a mature relationship with

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others. Similarly the sexual frustration of a woman who so frequently develops hypochondriacal complaints is only a part of the frustration from the general lack of demonstrative affection shown to her by her husband.

There is often a lack of demonstrative affection toward the children of such a marriage, yet when the children grow up and the mother is no longer the centre of the family, she senses a loss of affection derived from their former dependence on her and this is reinforced by the expectancy of their loving someone else and leaving home to marry. Later when a parent dies with whom there is at least some bond, the loss is particularly keen as they have so little other support to fill the gap.

The distinction between "true" and "subjective" is, of course, not clearly defined, and patients who break down under the stress of a "true" isolation have rarely felt secure in their relationship with people. In younger people changes in employment may result in separation from the family and this is now a well recognised difficulty among people living in the new towns. Similarly promotion, such as to foreman, may result in a necessary isolation from one's fellow workmates. "True" isolation is, however, commonest in the elderly and is difficult to overcome because of the rigidity and lack of ability to adjust which is associated with increasing age. Retirement, bereavement, and physical disabilities frequently result in loss of friends and loved ones, and in a state of apathy and depression, it may be very difficult to help the patient to start new interests and endeavours, to prevent his social contacts decreasing even further.

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Chapter 2

PSYCHIATRIC CASE TAKING

CASE HISTORY

This is basically the same as the assessment of any other patient. Take, for purposes of illustration, a patient with pulmonary tuberculosis. The doctor will not be satisfied with a simple diagnosis obtained from assessing the development and symptomatology of the present illness, followed by physical examination. He will probe into the patient's past history to assess the state of the lungs prior to his present illness and try to determine why this patient, rather than his neighbour, should develop tuberculosis. Genetic factors may lead to a predisposition or emotional or physically debilitating states may have rendered him susceptible.

A similar procedure should be followed with a psychiatric patient, but as the nature of the patient's disorder and mental state may influence the account he gives of his illness and past history, it is *important to get an independent account from a close relative or friend.* The aim is to make an assessment of the strength and weakness of the patient's personality and his ability to adjust to the usual stresses of life. Second, a search must be made for any genetic factors which may predispose to psychiatric disorder, and for any stresses, particularly those to which the patient might be unusually susceptible and which might be of ætiological importance.

The following headings provide a convenient skeleton around which the patient's history can be developed. However, the order in which the information is obtained will depend on each individual patient and experienced doctors will take each subject as it develops naturally, leaving subjects to which the patient may be sensitive until later in the interview. It is important to realise that psychiatric patients are frequently very sensitive to the first impressions the doctor makes and, for this reason, the first interview is *important from a therapeutic point of view* as well as from the point of view of general assessment and diagnosis.

1. *Complaints*

   History of present condition.
2. *Family History*, including ages and dates of death of parents and siblings with details of health and personality. In particular, an assessment should be made of the home atmosphere and of any genetic factors which might be of ætiological importance.

3. *Personal History*

   Early development including relations to parents and siblings, birth injuries or childhood illnesses, childhood neurotic traits.

   School record. Academic, social, etc.

   Work record, including dates and reasons for change of employment, present economic circumstances, ambition; satisfaction or reasons for dissatisfaction at work.

   Sexual, menstrual and marital record.

4. *Medical History*

   Physical.
   Psychiatric.
   Attitudes towards health.
   Habits—alcohol, tobacco, drugs.

5. *Personality Traits*

   A picture of the personality is best obtained from close friends or relatives, and they should be encouraged to give illustrative anecdotes with the idea of building a picture of an individual rather than a type. The following are suggested as headings:

   Social relations. Family, workmates, friends.

   Intellectual activities and interests.

Mood. Anxious, worrying, pessimistic, optimistic, self-confident, or self-depreciatory. Stable or fluctuating and, if the latter, spontaneous or in response to circumstances.

Character. Timid, sensitive, resentful, irritable, egocentric, fussy, rigid, etc.

Standards. Religious and moral.

Energy and initiative. Sustained, rhythmic or fitful. Decisiveness.

Fantasy life.

PHYSICAL EXAMINATION

This should be carried out in all cases, with particular regard to:

(*a*) Disorders of the central nervous system which may present with psychiatric symptoms.

(*b*) General medical disorders which may lower the patient's resistance to stress and so be of ætiological importance.

(*c*) Assessment of any physical deterioration, secondary to the primary psychiatric condition.

EXAMINATION OF THE MENTAL STATE

Behaviour and Talk

Abnormalities of general behaviour and appearance are usually the first sign to the relatives that the patient is not well. The facial expression, walk, dress, mannerisms, etc., are often clear indications of the underlying illness. The hair of the depressive, dark, lustreless, unwashed, and with the dye growing out; the nail-bitten and tobacco-stained fingers of the tense, anxious patient; and the fatuous, grimacing or apathetic appearance of the schizophrenic are obvious examples.

There can be excessively fast or slow speech. Hesitancy, discursiveness, etc., are common in states of anxiety and depression. Strange words, puns, or abnormal sentence construction are characteristic of certain forms of schizophrenia and may lead to incoherence, which is also common in states of dementia. Sudden changes of topic may occur in mania and schizophrenia, or simply because the subject provokes too much anxiety. The form of talk may likewise vary with the topic and give a clue to emotionally charged subjects.

Mood

Variety. Happiness, sadness, irritability, fear, worry, perplexity, indifference, etc.

Degree. It is, of course, most important to assess the depth to which a patient gets depressed in order to determine the risk of suicide. A shallowness of affect on the other hand is very significant and may be due to an organic or schizophrenic deterioration.

Constancy. This may shed light on the ætiology of the condition. For instance, a reactive depression would be suggested if the mood responded easily to changes in the environment. In certain schizophrenic patients, the mood may be incongruous, i.e. not appropriate to the particular circumstance. An abnormal lability of mood, on the other hand, is commonly due to an early dementing process when it is usually associated with a shallowness of the emotional response. However, lability of affect is also characteristic of hypomania, when rapid changes from euphoria to depression are typical.

Preoccupations and Morbid Beliefs

Obsessive-compulsive Phenomena. These are thoughts or impulses which repeatedly intrude against the patient's will and give rise to a subjective feeling of compulsion. Symptoms include rituals, phobias, ruminations, etc.

Delusions. A delusion is a false belief which cannot be corrected by an appeal to reason and which is not explicable in terms of education or life experiences.

Delusions may be *primary* (autochthonous) and come suddenly with conviction but without previous warning, or *secondary*, following hallucinations or developing from a real experience as a result of emotionally biased reasoning. They are usually classified as delusions of grandeur, self-reproach, of poverty, of reference, of persecution, or hypochondriacal delusions.

The term "*paranoid*" means that ideas or feelings are projected to someone else. They are common in schizophrenia, when the paranoid delusions are frequently those of persecution. However, paranoid delusions are common in depressive illnesses. A statement that people in the street called the patient a prostitute has the same diagnostic connotation as delusions of self-reproach, provided that the patient agrees she is as bad as a prostitute and that the comments were justified.

Disturbances of Perception

Depersonalisation. This is a subjective feeling of unreality, a feeling as if the patient has changed in some way, and his actions may feel automatic. *Derealisation* describes the state when the outside world appears strange or different. The two conditions are frequently associated. The disorder usually comes on rapidly and is described as unpleasant. It is common in states of anxiety, particularly in patients with an obsessional personality, but may occur in depression, schizophrenia, epilepsy and other organic states.

Illusions or falsifications of real perceptions are characteristic of organic states, especially delirium, and occur particularly in the half light of evening when perceptions are less clear.

Hallucinations are sensory perceptions without an objective stimulus.

Visual hallucinations do occur in schizophrenia, but are characteristic of organic states with impairment of consciousness and are particularly common in delirium.

Although most common in schizophrenic states, *auditory* hallucinations are not infrequent in organic conditions or, in a simple form, in affective states. They usually occur in the form of voices which may talk to the patient or discuss the patient among themselves. The voices usually appear to come from outside but may be located inside the head. Occasionally the voice seems to come from some other part of the body, such as a hand or foot, when the diagnosis is almost certainly one of schizophrenia.

Tactile hallucinations occur in schizophrenia and delirious patients. In schizophrenia, the genital organs are not infrequently involved and give rise to delusions of being raped, etc.

Olfactory hallucinations of an unpleasant character are not uncommon in schizophrenia, and may also occur in depressive states of a hypochondriacal type but otherwise occur only occasionally in organic conditions. They may be part of the aura in epilepsy.

Sensorium

Orientation for time, place and person. True disorientation only occurs in mental states with an organic ætiology and orientation for time is most vulnerable.

Memory. Loss of memory, especially for recent events, is typical of dementia. A complaint of "poor memory" is frequent in states of agitation, but this is due to lack of attention and concentration and must be distinguished from a true memory loss.

Grasp. This is also characteristically disturbed in dementing disorders but may suffer in any psychiatric disorder, secondary to lack of attention, etc. It is best assessed by testing the patient's general information and his ability to grasp the point of a story or a proverb.

Concentration and Attention. Attention may be difficult to arrest in organic states with clouding of consciousness, but also occurs in states of retardation or self-absorption due to depression or schizophrenia. More commonly, it is difficult to keep the attention of the patient or for him to concentrate. This may be because the patient returns to his predominant preoccupation (depression or schizophrenia), because the attention is so easily distracted (mania and some organic states) or because of variations in the level of consciousness.

Intelligence

Clinical Assessment. The patient's ability to describe his symptoms and their development.

School work and record, taking culture and physical illness into account.

General knowledge.

Special Tests. e.g. Stanford-Binet or Merrill-Palmer for children, and the Wechsler-Bellevue or Raven's Matrices for adults.

Attitude to Illness. Insight

Does he regard himself as ill?
What does the patient himself think is wrong?
Has he an appreciation that it is a psychiatric illness?
Does he understand the nature and extent of the disorder?
Has he an appreciation of what brought it on?
Does he think he can get well?

Chapter 3

ASSESSMENT OF THE PATIENT

In all cases an attempt should be made to answer the following questions:

(1) Why has this particular patient developed a nervous breakdown at this particular time?

(2) Why has he developed this particular type of disorder?

(3) What lines of treatment are indicated?

(4) What is the prognosis for the present disorder and for the future?

Certain disorders such as a classical schizophrenic illness can be diagnosed from the history of the present illness and examination of the mental state, similar to the practice in most medical conditions. In the majority of neuroses and affective disorders, however, greater attention must be paid to the patient's previous personality and background. The essential point to remember is that anxiety, depression, etc., are symptoms, analogous to pyrexia in an infective illness, and diagnosis depends on the underlying cause. Mistakes in diagnosis and hence treatment of psychiatric disorders are generally due to assessing symptoms and ignoring ætiology.

ÆTIOLOGY AND DIAGNOSIS

I suggest that the best way to assess the ætiology of a psychiatric disorder is by analogy with a balance (Fig. 1). On the one side one enumerates the stressors tending to precipitate a psychiatric breakdown. On the other side are the personality assets, defects and any genetic predisposition, which together determine the individual's ability to cope with such stresses.

Symptoms arise because the patient is unable to cope with his environment. Thus the doctor should approach the problem of ætiology by asking himself what sort of personality the patient had before he became ill.

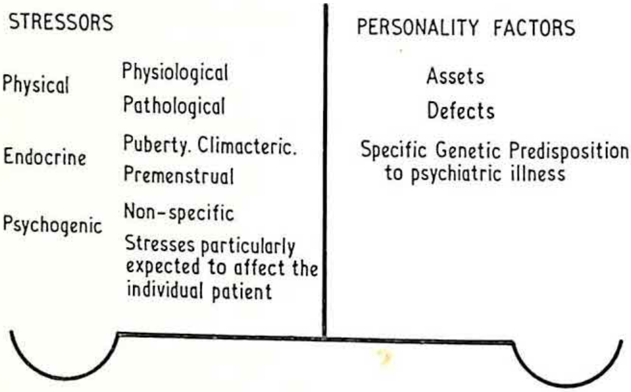

FIG 1. Illustrating a method of assessing ætiological factors by means of a "balance".

(1) Is the patient a man who has never been able to adjust properly to the stresses and strains of life and has a lifelong history of neurotic symptoms and, if so, are his present symptoms applicable in terms of a personality disorder?

(2) If his previous personality was a good one, has some stress occurred so out of the ordinary that he is now unable to cope, where he had always been able to do so before? As described in Chapter 1 these stresses can be classified as physical, endocrine, and psychogenic, and these latter may be non-specific or specific, when the patient is especially susceptible to the particular stress concerned. Further, these stresses may be cumulative. Thus a patient who is anæmic because of menorrhagia associated with the climacteric, may break down following the additional stress of her husband's death.

(3) Finally, although the patient's personality is, on the whole, stable, he may be genetically predisposed to psychiatric illness, e.g. depression, so that a relatively mild stress will precipitate such an illness. Evidence of such a genetic predisposition may be found in the family history or in certain characteristics of the personality.

If after a search as has been outlined above, no really convincing explanation can be found to show why this patient developed this particular disorder at this time, the case should be left *sub judice*, and further investigation may reveal some unsuspected organic disorder which is the underlying cause for the patient being unable to cope and for the consequent development of psychiatric symptoms. In essence, psychiatric diagnosis must be a positive one, as diagnosis by "exclusion" of an organic cause can be dangerous.

SYMPTOM FORMATION

The reason why this particular patient developed his psychiatric disorder at this particular time will have been answered from the above. It remains to assess the symptoms and find out if these too can be explained. Symptoms arise from three causes:

(1) Environmental factors.
(2) Personality factors.
(3) Genetic factors.

Environmental Factors

These are self-evident. Thus a psychiatric disorder precipitated by a sad event, such as a bereavement, tends to be coloured by depressive symptoms related to the loss of the loved one. In a more subtle way, an anxious patient may develop fears of dying from some illness with which he has been in close emotional contact.

Personality Factors

These are usually the predominant factors in determining how the psychiatric disorder manifests itself. Thus, if an anxious man is unable to cope with life for one reason or another, his symptoms will be those of anxiety and the form they take will again depend on his personality make-up. Again, patients with an obsessional personality tend to develop obsessional symptoms, hysterical persons hysterical symptoms, etc.

Genetic Factors

If a genetic predisposition results in the development of a specific illness such as mania, depression or schizophrenia, the symptoms are fundamentally those of the illness concerned.

It must be realised, however, that none of these factors act alone and the manner in which a genetically determined illness manifests itself will depend to a considerable degree on precipitating factors and the patient's underlying personality. Thus a depressive illness precipitated by the death of her child may result in the patient blaming herself or, in a paranoid way, believing that her neighbours are talking about her and saying it was due to her negligence that the child died. Lastly, a genetically determined illness may in itself give rise to neurotic symptoms. Very commonly a mild depressive illness results in

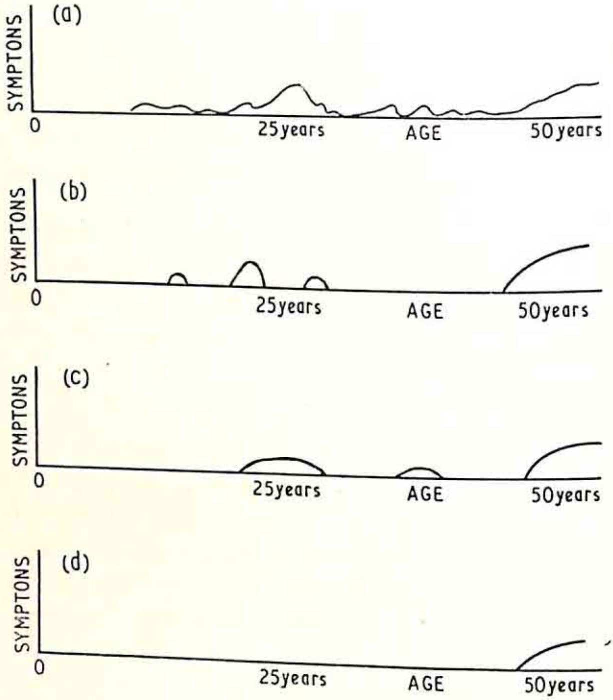

FIG. 2. Illustrating the life histories of four types of patient who present with neurotic symptoms at the age of 50 (see text).

(a) Chronic neurotic
(b) Reactive
(c) Secondary to an endogeneous depression
(d) Secondary to organic illness.

the patient being unable to cope with life and consequent on this, neurotic symptoms develop which may predominate and mask the underlying depression.

As illustrations, let us examine four types of patient, each of whom may present with neurotic symptoms. The patient is a woman of fifty years, whose mother has recently died. (Fig. 2.)

(*a*) Studying this first patient's life history it is evident that she has had similar symptoms most of her life and which are aggravated by many events, some of which are more stressful than others. She is a chronic neurotic, a patient with a personality so defective that she has never been able to make more than a precarious adjustment in life. Thus, it will be expected that even a relatively mild stress would be sufficient to cause a considerable exacerbation of symptoms. The doctor may well be satisfied that her mother's death is sufficient reason for this particular patient's symptoms.

(*b*) This patient has a fairly stable personality and has been relatively free from psychiatric symptoms. However, it is noted that she has some predisposition to an affective illness in that her mood is labile and there may be a family history of depression. It is further noted that she has few friends, reacts easily to the loss of such acquaintances as she has and had a short-lived psychiatric disorder in her late teens after a romantic disappointment. It is found that her mother is the only person on whom she could depend and then only partially. The death of her mother would be expected to be particularly stressful, especially as her own children may have married and left home, and may be considered quite sufficient to precipitate an affective illness of a predominantly reactive type. She may be obviously depressed but is likely to have neurotic concomitants, depending on the degree of anxiety, obsessional or other such traits in her personality.

(*c*) This patient has a family history of affective illness and she herself developed a personality showing well marked mood swings of a spontaneous nature. Looking back over her life history she has had two other upsets when she had psychiatric symptoms, though these may have been given an organic label (anæmia, vitamin deficiency, etc.). She is genetically predisposed to affective illness and is of the age when depressive illnesses are especially liable to become manifest. The death of her mother might be expected to precipitate a depressive illness in such a patient. This may present as a typical endogenous depression. On the other hand, if the depression is mild and the patient has in addition a personality marked by obsessional, histrionic, or other such traits, the illness may present with obsessional or hysterical symptoms and the depression not be obvious, manifesting itself mainly with "negative" symptoms. (See p. 88.) The doctor must then ask himself why this patient should suddenly develop neurotic symptoms now, when apart from two isolated illnesses she has been free from such symptoms all her life. Is her mother's death of particular significance (as in Case *b*) or has it precipitated an underlying depressive illness to which the patient was genetically predisposed? This could result in the patient being unable to cope with life (and the loss of her mother) and give rise to neurotic symptoms of a secondary nature.

(*d*) This patient has been free from psychiatric symptoms all her life, despite repeated hardships. There is no history of psychiatric illness in the family nor is there any evidence of predisposition to psychiatric illness in her previous personality, which was a well-adjusted one. The doctor cannot convince himself that her mother's death is sufficient reason for her breakdown, nor is he satisfied that endocrine changes in addition chould explain her symptoms. Further investigation reveals an organic disorder (early dementia, marked anæmia, etc.). This has resulted in a patient who, though previously able to cope with all the stresses of her life, is now unable to do so and who consequently presents for the first time with neurotic symptoms.

TREATMENT

It is only from a proper assessment of the ætiology and diagnosis, as above, that one can formulate a plan of treatment. This will be directed on three lines:

(1) Removal of stressor factors.

(2) Assisting the patient to make more of his personality assets and cover his defects; in other words helping him to adjust better by means of psychotherapy.

(3) Physical treatment, which may be aimed at specific treatment of an endogenous factor, or simply at symptom relief until psychotherapy or environmental adjustments are under way.

Treatment should be aimed at what is treatable, not at the most important ætiological factor. However, it is useful to make a note of the contribution each of the ætiological factors is thought to play, e.g. environmental 30%, personality 10%, genetic 60%. In such a patient the therapeutic emphasis would be on physical measures and, if possible, on methods designed to alleviate the precipitating cause. On the other hand, in a patient where the ætiological factors were assessed as reactive 30%, personality 60%, endogenous 10%, it may be impracticable to modify either the defective personality or the environmental factors. In this case the small improvement to be gained by physical treatment may be the best means of enabling the patient, with support, to overcome his environmental difficulties.

PROGNOSIS

This again is derived from the assessment of the ætiology and diagnosis. The nature of any underlying genetic or endogenous illness would be predominant in assessing the outcome, but the following will influence the doctor in giving a more favourable prognosis.

(1) A good previous personality.
(2) Severe precipitating stress.
(3) Acute onset.
(4) Absence of atypical features.

Thus, taking our four original illustrative cases, the first patient, because of her very defective personality has a poor prognosis and would be expected to break down under relatively minor stress. She can be tided over her present exacerbation but will remain neurotic with a residue of symptoms and be liable to relapse under any future stress. Case (2), on the other hand, only broke down under what was to her a major stressful event. Prognosis in her case will depend on the degree to which the environment can be modified and the patient helped to adjust to the changed circumstances. In Case (3) endogenous factors are predominant and the prognosis will be that of the specific illness, though the more typical the illness the better the prognosis for the immediate attack, and the better the personality the better the prognosis for future recurrence as she will be more able to withstand psychogenic stresses. Finally Case (4) had been free of all psychiatric disorders until some organic factor rendered her unable to cope with life as efficiently as formerly. Here the organic factor is predominant, and, if this can be dealt with successfully, the prognosis for the present illness and for the future will both be excellent.

Chapter 4

PSYCHIATRY OF PHYSICAL DISORDERS

THE PSYCHOSOMATIC APPROACH

The essential link between psychiatry and general medicine lies in the impossibility of treating states of mind apart from states of body and vice versa. It is common knowledge that anxious, miserable patients only get better slowly and relapse often, and from the preceding and later chapters it will be realised that many psychiatric disorders are based on abnormalities of genes, biochemistry, endocrinology, etc. In other words, clinicians adopt a psychosomatic approach to all their cases and the role which physical and psychogenic factors play in any individual patient is a matter of degree, rather than "either/or". (Fig. 3.)

Even in obviously psychiatric illnesses such as depression, it will be seen (Chapter 7) that physical factors often play an important ætiological role and bodily changes, such as in weight, sleep and menstrual rhythm, occur as a result of the illness itself. At the other extreme, a fractured leg or sprained ankle can be expected to give rise to distress and anxiety because of the pain and inconvenience, but psychiatric factors may play a part in the ætiology: personality and psychogenic factors are now well established in people recognised as being "accident-prone". In the so-called psychosomatic group of disorders, psychogenic and physical factors are thought to play equally important roles. However, any individual patient may depart widely from the group mean; the asthmatic attacks in one patient may be caused predominantly by infective, and those in another patient by emotional factors.

PSYCHIATRIC ASPECTS OF PHYSICAL DISORDERS

From the earliest phase of any illness, the doctor's thoughts should be directed to the total rehabilitation of the patient.

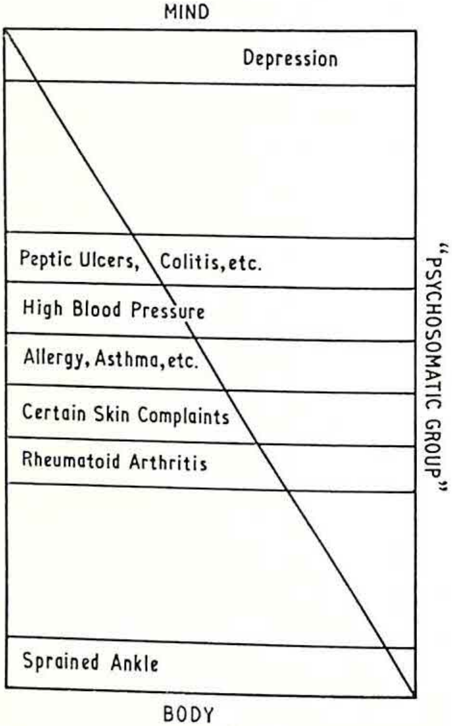

FIG. 3. Illustrating the psychosomatic approach to medical disorders.
From Stafford Clark, *Psychiatry Today*, Pelican Books, 1952.

Success will depend not only on the nature of his physical disorder and any consequent disability, but on the patient's attitude to it. Considering purely the psychiatric aspects of rehabilitation, it is convenient to look at the case from the points of view of:

(1) Ætiology.
(2) Present illness.
(3) Future.

Ætiology

Even in obviously physical disorders, such as congestive heart failure or cardiac infarction, the physician should ask himself why the patient should become ill now rather than last year or twelve months hence. Frequently some factor will be found to have precipitated the physical disorder and this may be frankly psychiatric in type. Domestic worry or increased responsibility at work may result in as much sleeplessness or physical fatigue as, for instance, nursing a sick child or elderly relative. Certainly the assessment of the case is incomplete without this data as measures must be taken to alleviate these factors when the patient resumes his former responsibilities.

Present Illness

Relaxed, contented patients get better more quickly than those who are anxious and fretful. Examples where this is put into practice are the ante-natal instruction of new mothers-to-be and the sedation and reassurance of patients with a cardiac infarction. For a hospitalised patient, the three things which cause worry are:

(1) his family
(2) his present illness
(3) the future

and the factor which increases any worry is ignorance, as imagination can then run riot. Lack of visitors or a delayed letter may lead to undue concern about his family, while chance remarks from the nurses, doctors, or other patients, may be interpreted as referring to him; words such as "neoplasm" and "prognosis" have particular emotional significance.

Worry about the family is natural and attempts should be made to relieve it, otherwise the patient will remain anxious and perhaps insist on going home and undertaking activities for which he is not ready. Relatives should be encouraged to write and visit, and if they are unable to do so the almoner may be able to visit the family and so satisfy the patient as to their well-being, financial situation, etc.

Similarly, the patient should be told what is wrong with him, what treatment is necessary, and how long he is likely to remain in hospital or in bed. It is not sufficient and sometimes not advisable to tell the patient the medical diagnosis, but an explanation in terms suitable to the individual should be given in every case. However mundane the disorder may be to the doctor, it is an important milestone in the patient's life and the void left by lack of proper explanation will certainly be filled by the patient from some source or other. It is even more important to tell the patient how long it will be until he is fully fit and what, if any, will be the permanent effect of his illness.

The Future

The aim of the doctor must be to obtain the most successful degree of rehabilitation, not only from the point of view of work capacity but of enjoyment and general success in life. This entails the patient having a hopeful and forward-looking attitude toward his illness and any resulting disability. The permanent physical disability may be negligible but the attitude of the patient toward his illness may be such as to lead to psychogenic invalidism or minor of severe degree. When the patient has been cured, it is essential to insist on him leading a full life in all respects, to avoid any unnecessary invalidism which stems so often from attitudes such as "I have to be careful of my diet" or even "it left me with a tired heart".

A patient with a cardiac infarction may have some restrictions placed on his activities, yet in fact it is usually only the excesses which are excluded and, again, one should encourage the patient to plan and look forward to an active and constructive future. In the past, the emotional connotation attached to a heart attack and the emphasis placed on the things a patient must not do, led to such frequent psychiatric complications that they were spoken of as entities in their own right. The idea that he was living "on the edge of a precipice" led to the patient imposing more and more restrictions on his life with increasing introspection, anxiety and depression.

Finally, there are the patients whose disabilities will be permanent and possibly severe. Such patients range from amputees to cases of hemi- or paraplegia and severe rheumatoid arthritis. Rehabilitation of these patients is often difficult, yet is of the utmost importance. Their way of life may have been completely altered, and they must be helped to adjust to a new way of life which is as useful and as independent as possible. In young amputees, appliances, rehabilitation centres and industrial retraining frequently enable patients to earn a living, which is itself a morale booster, and similar training programmes and domestic gadgets may do the same for the disabled housewife. Much depends on the patient's previous personality and his ability to adjust to change; but equally the hope and enthusiasm of the doctors, nurses, relatives, etc., may be the key to successful rehabilitation in any individual patient. More difficult are the elderly patients, as their mental and physical capacity to adapt themselves to a new way of life is frequently limited. However, it is most important to foster a feeling of independence even in the partially bed-ridden patients, and their ability to do even a small amount of housework will help to give them a sense of usefulness and hope, in place of a feeling of being a burden. In many such cases the relatives need support and encouragement; visits from the doctor which are allowed to become perfunctory are probably worse than no visits at all, as this infers a loss of interest which is demoralising to both patient and relatives.

CARE OF THE DYING

Relatives undergo considerable stress at this time and merit the care and attention of the doctor almost as much as does the patient. The nursing of a terminal illness can be exacting; arrangements should be made for these duties to be taken in rotation or, failing this, the health visitor, the Church, and voluntary services may be called upon to help find people to stand by at night so as to give the relative a reasonable night's sleep. In addition to physical needs, the relatives frequently need a sympathetic ear for a host of emotional worries. Among these may be a sense of loss or unfairness, economic fears or fears for the future, particularly of loneliness. Sometimes the relative may feel guilty for something said or done to the patient, or the patient's illness may arouse fear of his own death.

Frequently the relative is ashamed to talk of these "selfish" worries, and the attitude of the doctor will determine whether or not he can discuss his feeling for the future.

The care of the dying is indeed an art which can only be learnt by experience and application. A true assessment of prognosis is necessary to be able to advise on management: whether a nursing home is advisable (finance), whether the patient can stay in bed or be mobilised to stop pressure sores (in which case a hospital bed and pulley or special chair may be useful) and, finally, with what degree of enthusiasm anæmia and local or intercurrent infection should be treated and dietary supplements provided, to support the patient's health.

No general ruling can be given as to whether a patient should be told that he is dying. This is a decision which is best made by the patient's own doctor, who may seek the advice of the relatives. Certainly when a patient with a terminal illness is discharged from hospital, the family doctor should always be informed as to what the patient has been told about his illness. Many patients do not want to know and usually have no idea of the true state of affairs, though at times this may seem inconceivable. A patient may ask the doctor for "the truth" but really be seeking reassurance. Even when personal, business, or other considerations require that the patient be told he is likely to die, he may still be given some hope. Young doctors frequently feel a sense of helplessness in this situation and do not recognise that considerable comfort can be given to the patient, depending on the skill and understanding of the doctor. William Hunter said "How easy and pleasant a thing it is to die" and the act of dying can and should be peaceful. It is the fear of dying, the fear of pain, and anxiety for his family which disturb the patient, and the doctor should attempt to reassure the patient in all these aspects. Here social agencies and ancillaries, and in particular the Church, can be of great value.

Drugs should be used to ensure sleep, freedom from anxiety, and freedom from pain. Relief of anxiety should be tackled as far as possible by dealing with the causes as outlined above, but promazine is often helpful, as is alcohol which, combined with a hypnotic, can be used to induce sleep.

Pain should be relieved by adequate doses of analgesics. In general, morphine or its derivatives should not be given too early because of the development of tolerance, but this should not deter the doctor from giving it when other analgesics are inadequate. The patient has a right to be relieved of needless pain and though side effects may become apparent with increasing dosage, they can usually be dealt with by antidotes. An anxious patient tolerates pain poorly and pain itself promotes anxiety and fear. The knowledge that his pain will be relieved is vital to the comfort of any patient and experience shows that *frequent small doses of analgesics, to prevent the pain becoming distressing, are far more effective than similar quantities of drugs used infrequently but in large amounts.*

PSYCHOSOMATIC DISORDERS

As mentioned above, the psychosomatic approach is applicable to persons suffering from any illness, but its usefulness varies quantitatively with different kinds of illness. At one extreme, such as measles, the nature of the disease and its causes can be understood in terms of the somatic approach alone. At the other extreme, psychological factors are of the highest relevance in that they furnish a new insight into the nature and causes of many common incapacitating disorders and thereby provide further guidance for treating and preventing them. For practical purposes the term "psychosomatic" disorder is used for those physical illnesses in which psychogenic and physiological factors are ætiologically important and clinically or experimentally demonstrable. In fact there are usually many factors which can contribute to the manifestation of any particular disorder in this group. The role of psychogenic factors varies from patient to patient and even from one attack to another.

Epidemiology

The incidence of psychosomatic disorders not only appears to be increasing but there are signs suggesting that this is a true increase which started at the beginning of this century. If the increase in peptic ulcer, for instance, were due entirely to better diagnostic facilities, one would expect the increased incidence to be the same in males and females. In fact, as judged by perforations, the proportionate incidence in women has fallen markedly and there has been a simultaneous shift in the age of onset when comparing the two sexes.

Halliday attributes this increase in psychosomatic disorders to a disequilibrium, leading to disintegration of the society. He shows how this has occurred due to outside influences among the Red Indians, Aborigines, and certain tribes in Asia. The disruption of the social patterns led to apathy, dissipation, delinquency or rioting, and a decline in population. There is also evidence that whereas peptic ulcer, hypertension and exophthalmic goitre had an extremely low incidence in primitive races, they began to appear as the society became disrupted by the introduction of Western industrialism.

According to Halliday, it is the sense of unity and purpose which holds society together and when this is lacking the society becomes "sick". This is just what happens with smaller communities, e.g. the Army and industrial units, and he points to the lower incidence of psychosomatic disorders in rural communities, where there is a sense of unity, compared to urban areas. Further support for the thesis that a sense of unity and purpose is important for the mental, and consequently psychosomatic, health of a community, stems from the incidence of peptic ulcer in various groups during the last war. Thus, the increase in ulcer frequency in Germany was not found among front line troops, but among home services and the services behind the lines. Even more striking was the finding that ulcer rate decreased in concentration camps, but increased after the liberation of the prisoners.

Experimental

The classic demonstration of emotional factors producing tissue changes is that by Wolf and Wolff. Tom was a proud, rather obstinate man who worked in Wolff's laboratory in New

York University. He had a gastrostomy of many years' duration and agreed to submit himself to regular observation. This included daily observation of the gastric mucosa and analysis of the stomach secretions. In brief, they showed conclusively that Tom's gastric mucosa mirrored his mental state. When he was angry, and particularly if this anger was pent up and frustrated, his gastric mucosa was swollen, red, congested, and bled at the slightest touch. At the same time, the secretion of acid increased markedly. On the other hand, if he was depressed and lethargic, the mucosa was grey and pallid and the secretion was mostly mucus. Such findings have since been confirmed in many other tissues controlled by the autonomic nervous system, including colon, bronchus, skin, blood vessels and nasal mucosa.

Psychogenic stress can act through the endocrine system, and is one of the stressors which can produce the various physiological, biochemical, and endocrine changes of the *general adaptation syndrome*. However, it is probable that emotional factors can act directly, via the autonomic nervous system. The immediate reactions to emotional stress, seen for instance in asthma, would be easily explicable on this basis and, indeed, there is a mass of evidence to support such a neural pathway stemming presumably from the limbic system.

Clinical

Asthma is a very suitable condition in which to study the role of emotional factors because the attacks occur at a particular point in time and are readily observable by the investigator. An especially well-designed study of asthmatics was carried out by a team including a chest physician, allergist, and psychiatrist, who each assessed the patients separately. These authors showed that psychological factors were important in 70% of cases and dominant in 37%. However, they showed that frequently more than one factor might be active at any one time and emotional factors often acted by enhancing the effect of an infective or allergic precipitant (Table II). A similar state holds with other conditions (Table III).

TABLE II. Illustrating the Importance of Various Ætiological Factors in 441 Cases of Asthma

(From Rees, L., 1956, *J. psychosom. Res.* **1**, 98.)

	Dominant %	Subsidiary %	Unimportant %
Psychological	37	33	30
Infective	38	30	32
Allergic	23	13	64

TABLE III. Illustrating the Role of Emotional and Other Precipitants of Attacks Various Psychosomatic Disorders

(From Rees, L., 1959, *Proc. roy. Soc. Med.*, **52**, 274.)

	Psychological %	Allergic %	Infective %
Asthma	74	36	68
Vasomotor rhinitis	57	56	57
Hay Fever	36	100	0
Urticaria/angio-neurotic œdema	68	35	15

This concept of multiple causation and interplay between various ætiological factors is important and the potentiating effect of emotional stress on allergic and infective or other physical agents has been amply confirmed experimentally. For instance, it has been shown that emotional stress can cause congestion and hypersecretion of the nasal mucosa in susceptible subjects and furthermore they then had a much greater abnormal response to a standard dose of mixed pollen. Other instances demonstrate the potentiating effect of emotional stress on the itch response to intradermal histamine, on the volume of bronchial secretions in infected bronchiectasis, and on mechanical trauma in stomach, colon, conjunctiva, etc.

Specificity

For years psychiatrists have tried to find reasons to explain why one patient develops asthma and another a duodenal ulcer. Investigations have followed three main lines:

1. *The Type of Stress.* These are essentially similar in all psychosomatic disorders, both in association with the onset of the disorder or with the occurrence of attacks during the course of the illness. In essence they are similar to the emotional stresses which are important in all the neuroses and affective disorders (see pp. 19–22). In particular, bereavements, separations, and unfair criticisms or let-downs, whether real or imagined, seem to be particularly important and give rise to feelings of anxiety, sadness, or anger. Analytically inspired theories that specific emotional stresses in early childhood may determine the type of psychosomatic disorder have not so far been substantiated.

2. *Personality Type.* Here again, specific personality types cannot be related to individual illnesses. Rather, there is a general similarity in the incidence of various personality traits in most psychosomatic disorders; anxious, sensitive, obsessional and meticulous traits are particularly strong. Although many different kinds of emotion may precipitate an attack, the most common being anxiety, anger, resentment, hostility and humiliation, the suppression or bottling up of emotions is more important. Prominent traits of anxiety and sensitivity predispose to excessively strong emotional responses and obsessional and meticulous patients are the ones who tend to bottle up these emotions. Thus a personality showing all these traits strongly, would be more than usually vulnerable to emotional stress.

3. *Genetic and Constitutional.* In most psychosomatic disorders there is a family history of that affection and it is apparent that a predisposition is transmitted and becomes a part of the patient's constitution at an early age. Whether this is due to early environmental factors or true genetic inheritance is uncertain in many instances, but as more syndromes are investigated from a genetic aspect, it is becoming more and more likely that genetic factors are important. It is the predisposition to a particular disorder which is inherited and symptoms appear when physiogenic and psychogenic factors, either separately or in combination, act in sufficient degree.

A careful study of asthma has been carried out by Leigh and Marley. They studied 55 asthmatic probands and 55 control probands, together with their first and second degree relatives. Amongst the many findings in this genetic study was a significantly higher incidence of lower respiratory tract disorders in the asthmatics families as compared with the controls, and a significant relationship between psychiatric illness and asthma.

Studies in duodenal ulcer demonstrate the presence of a genetic predisposition to the condition, patients with a family history having an earlier onset of symptoms, a more serious course, and a tendency to the formation of anastomotic ulcers. Genetic factors have also been shown in exophthalmic goitre, migraine, and angioneurotic œdema and, as has been stated above, a family history is usual in all psychosomatic affections.

To summarise, it is fair to say that some people are constitutionally predisposed to a particular psychosomatic affection. When such a predisposition is present, both psychogenic and/or physiogenic factors may precipitate the manifest disorder and these factors frequently act together.

Treatment

This should be carried out by the family doctor or general physician who is able to see the case in all its aspects. With all patients he should ask himself:

(1) What kind of person was this?
(2) Why did he become ill when he did?
(3) Why did he become ill in the manner he did?

Only by asking himself these questions will the doctor arrive at the full ætiology of the disorder, be able to assess how much is physical and how much emotional, and following this, how these factors can be rectified. In most cases he will be able to tackle any emotional stress by straightforward discussion (see p. 58) at the same time as he treats the physical aspect. Psychiatric help is best reserved for those patients who do badly in spite of adequate physical treatment and general discussions of their problems, when some more subtle emotional stress may be present but unrecognised. After consultation, most of these cases can be kept under the wing of one doctor with all the advantages this entails and it is only very occasionally that a psychiatrist should take over the treatment of the emotional aspects.

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Chapter 5

PERSONALITY DISORDERS

In these disorders symptoms or abnormalities of behaviour occur as the patient is unable to adjust to or cope with his environmental difficulties. This is a matter of degree. An individual with a relatively good personality will be able to cope with most things, but a severe stress may give rise to reactive symptoms. A more unstable person on the other hand tends to show continual minor symptoms as he is unable to cope with everyday events, but shows periodic exacerbations in response to more severe environmental difficulties. It is the latter patient with more or less lifelong symptoms to whom we refer in this section.

PSYCHONEUROSES

The patient complains of symptoms which are disturbing to him. They tend to be exaggerations of underlying traits in the patient's personality and one may distinguish obsessional (including phobic), hysterical, anxious and depressive reactions. These, however, are frequently intermingled and some patients are best described as having a "mixed neurotic reaction".

Obsessional Neurosis

Personality. This is almost always characterised by some at least of the following. A liking for precision and routine in all aspects of life, tending to make for rigidity; a woman is meticulous and houseproud, does her work in a strict routine and is upset when things go awry; an obsessional man is similarly perfectionist and dislikes a disorganised or ill-defined job. They dislike doing things on the spur of the moment, preferring to plan ahead and discuss projects. They are often indecisive and careful with money. Relations with other people tend not to be spontaneous. The patient has difficulty in making friends and these are very seldom close. This is seen also in the marital relationship which is typically lacking in demonstrative affection, and sexual relations are inhibited and of little importance to the patient.

Symptoms usually develop insidiously during the end of the second or beginning of the third decade, though some particular event may appear to precipitate them. A normal personality trait may become exaggerated to the extent of becoming incapacitating, but new symptoms frequently arise often having a symbolic meaning for the patient. Symptoms can be classified as phobias, ruminations, ideas and images, and impulses. *Phobias* are common, especially of dirt. A scrupulous cleanliness develops into a marked fear that the patient may be contaminated with dirt, and he becomes extremely anxious until he has scrubbed his hands with disinfectant in a repeated and elaborate routine, perhaps lasting an hour. The usual routine of dressing, turning off the gas taps, etc., may be exaggerated to the point when he is filled with doubts as to whether he has done it properly and he has to repeat the routine over and over again before he is satisfied (*folie de doute*). The fears are often far-fetched. For instance a compulsion to pick up an empty matchbox or piece of paper in case someone trips over it and fractures his skull. The patient realises the foolishness of the fear and may be reluctant to approach a doctor for this reason, yet is compelled to go back and pick up the paper or matchbox.

Symptoms may take the form of mental *ruminations* whereby the patient has to do and think things by numbers which may be so elaborate as to stultify all progressive thought or activity. Alternatively the patient may be afflicted by endless self-questioning into meanings and causes of problems quite beyond his grasp, e.g. religious and philosophical problems. *Ideas and images* may be disturbing only from their persistence, e.g. a tune, or, by the nature of the words, phrases or mental pictures, may offend the patient by their obscenity or disagreeableness. *Impulses* again may be fairly harmless, such as a compulsion to swear in church, but may be more disturbing.

Impulses to jump from a height, or for the patient to kill her children, are common and the latter often leads to a phobia of knives. Luckily this type of patient can usually be reassured that she will not in fact ever harm her child, though occasionally the patient herself may commit suicide rather than risk hurting someone she loves.

The ramifications of obsessional symptoms are endless but the diagnostic characteristics are common to all. These are:

(1) *An experience of subjective compulsion.*

(2) *An effort to fight against these compulsions.*

(3) *Symptoms of anxiety which are only dispelled by a satisfactory completion of the routine.*

Prognosis. When an obsessional neurosis develops insidiously based on a well marked obsessional personality, the prognosis is bad. The condition tends to be long-standing, but with fluctuations in severity. In one patient symptoms may become less severe and more easily controlled and the patient may be able to lead a reasonably normal life for years at a time. In other cases the symptoms continue to an incapacitating degree for years on end, though even in these cases an abrupt remission may surprise everyone.

Obsessional symptoms based on a more normal personality, and which only occur in reaction to a significant stress, have a proportionately better prognosis and in favourable cases clear up completely as soon as the underlying cause has been removed. An underlying depression may account for a cyclical course in some obsessional states, and obsessional symptoms arising for the first time in middle age frequently have a depressive basis.

Hysteria

Personality. The key to all the personality abnormalities in hysteria is egocentricity. The patient is unable to make a proper relationship with others and her relationships are superficial and ephemeral. She seeks affection, and is typically flirtatious and attention seeking but at the same time is unable to give true affection in return and is frequently sexually frigid. Because of an inability to make true and lasting relationships, she lacks stability. She is unable to plan for the future and lives only for the present. Because of this she is like a ship without a rudder and is blown hither and thither by the winds of the environment. She reacts unduly to day-by-day events, being easily upset and as easily made happy again. She is unable to face up to difficulties and will try to avoid them.

Symptoms of hysteria occur when such a patient is unable either to cope with or evade a difficult situation. This leads to anxiety and the conflict is solved, unconsciously, by the development of a somatic disorder. This is called a *conversion* symptom as the anxiety is converted into the somatic disorder and thereby relieved—in fact the patient may seem quite unconcerned with her disability (the classical "belle indifference"). With the relief of anxiety there is *secondary gain*, which means that the somatic disorder enables the patient to avoid the difficulty which she was originally unable to face. The symptom always involves the voluntary nervous system—paralysis, amnesia, or pain—and never the autonomic system. It is usually easy to demonstrate that the signs and symptoms could not be caused by an organic lesion as the disorder is one of function rather than one conforming to a nervous distribution.

Anxiety States

Personality. This is really a minor degree of a manifest state of anxiety. The patient has often shown minor neurotic traits as a child—nail biting, nightmares or enuresis—demonstrating a feeling of insecurity and tension. She frequently develops into a shy, retiring girl who has difficulty in making friends and then is unable to have complete confidence in them and she herself feels insecure, lacking in confidence and with an "inferiority complex". Normal adolescent worries are exaggerated and dysmenorrhœa and sexual problems after marriage are frequent. She is often thin and asthenic, knows herself as a worrier, and tends to cross her bridges before she comes to them.

Symptoms. A small degree of anxiety is practically always present, stemming from the personality, and superimposed on this are accentuations and crises in response to stress of any type, physical or psychogenic. Because anxiety is so often based on a feeling of insecurity and lack of confidence, the symptoms are usually less intense when the patient is with someone she trusts and when she is in her own home. Anxiety reactions are often accentuated by going out of doors, travelling in an underground train, or being confined in a closed space. These, however, should be differentiated from a true phobic state where there is an absence of anxiety except in specific situations. The symptoms of anxiety may be "free and floating", i.e. the patient becomes apprehensive without attaching her anxiety to an objective situation. She feels something terrible is going to happen and becomes increasingly frightened, sweats, trembles and develops palpitations and a tight choking feeling in her throat. Other symptoms are faintness, blurring of vision, dry mouth, nausea, and occasionally diarrhœa. Frequently the fear is focused on one function or one part of the body and the patient may show an overwhelming fear that she is going to die from choking, a heart attack, etc.

The onset of an attack is never sudden in a true anxiety reaction and an unprecipitated, instantaneous attack may well be a manifestation of an atypical depression. The onset may be rapid, over half a minute, or gradually increasing over an hour or more and the attack may be precipitated or come on apparently spontaneously. Further the anxiety may be episodic, fluctuating, or constant over a long period. Although anxiety is the predominating symptom, some degree of depression is almost constant, usually in the form of worrying about her symptoms. The constant tension and anxiety may lead to physical tiredness which is worse at the end of the day, and appetite may also be affected. Sleep is frequently delayed by worrying thoughts and may be disturbed by dreams and nightmares.

Neurasthenia

Neurasthenia was originally thought to describe an actual exhaustion of the nervous system. Although this notion has fallen into disrepute, the term is still useful as there is widespread agreement as to the clinical form of the disorder, a syndrome which is frequently seen in practice.

The capacity to withstand stress varies in degree from one individual to another. Some patients have shown a relatively normal resilience until intense or long-continued stress in the form of irksome working conditions or domestic disharmony precipitates a neurasthenic reaction. Neurasthenia may also be the sequel of a long-standing anxiety state or a debilitating physical illness. In some patients, however, a tendency to neurasthenia is a part of their normal personality and symptoms arise under relatively minor stress. Such patients are frequently of an asthenic build and their mental and sexual drives are weak.

Symptoms consist of psychic and sensory irritability, inability to concentrate, persistent or transient states of anxiety, dizziness, insomnia, headaches, often with pressure in the head, muscular weakness, all kinds of digestive disturbances, and cardiovascular complaints. Both mental and physical effort provokes a complaint of fatigue, though this may be limited to tasks of a disagreeable nature. Hypochondriacal ruminations are common and at times the patient's thoughts may dwell on suicide though these patients are usually amenable to reassurance and are rarely a serious suicidal risk.

Hypochondriasis

This is almost a normal accompaniment of the elderly, in that a preoccupation with bodily functions is usual in people over sixty years of age. Hypochondriasis is also common in athletes and medical students or as a complication of neurotic states. Certain patients, however, have an abnormal somatic fixation. They may, on the one hand, be preoccupied with health and physical fitness, going to extremes of physical training, health camps and dietary regimes. On the other hand, they may concern themselves with disease, treating themselves with patent medicines for minor complaints, taking excessive periods off work to rest in bed or convalesce, or pestering their doctor for medicaments or "check-ups".

An obsessional personality with depressive and anxious components is common in hypochondriacal patients, an obsessional and rigid personality being found in the monosymptomatic type of hypochondriasis and anxious and depressive personalities more common in the multi-symptomatic types. The common feature is that, whereas most somatic sensations are below the levels of consciousness, unless a particular effort of concentration and introspection is made, the hypochondriacal patient is much more sensitive to mild degrees of pain or aching, fullness of the stomach or bladder, headaches, etc., which are interpreted as being of undue significance and continually preoccupy his thoughts.

TREATMENT

Psychotherapy

Since neurotic disorders are fundamentally disorders of personality such that the patient is unable to cope with various difficulties in life, one method of treatment would be to attempt to correct the personality defects. Psycho-analysis makes this attempt but is extremely time-consuming and patients suitable for analysis are few. Failure of the treatment often leaves the patient worse than before, in that he is frequently grossly introspective and approaches problems by looking into his distant past for the explanation. In the majority of patients, a more practical plan of treatment is to persuade the patient to accept his disability and then show him how to live with it and learn to overcome it. This incorporates suggestion, reassurance, encouragement and re-education.

For example, a patient presents with long-standing anxiety symptoms of fluctuating severity but which at times are almost incapacitating. She is fearful, not only because of her present symptoms, but because she never knows when they will come on or what to do about them. She seems to be completely at the mercy of some irrational disorder and she has lost her confidence and self-respect as a result.

This first interview is very important and should not be hurried. The doctor should be prepared to spend a full hour over the history and examination, allowing the patient to go into her worries and symptoms in full. The feeling that the doctor has taken time to understand her position fully will form the basis for her future relationship with the doctor and make her more ready to accept his suggestions and explanations. Having taken a history from her and her relatives and examined her thoroughly to arrive at a full assessment of her state, the doctor should contrast his own attitude with the lack of confidence in the patient. This is due to the doctor's knowledge of neurotic disorders, his appreciation that symptoms come on in an entirely rational and logical manner, and his confidence in being able to control them. It is the doctor's aim to teach the patient as much as he can about her disorder so that she too will be able to understand the nature of her symptoms, the reasons for exacerbations, to anticipate them and at the same time to know what to do when they arise. Only by acquiring this knowledge will the patient become confident in her ability to control her symptoms, to become independent of doctors and to be able to cope with life as successfully as her neighbours. It is usually best to start by explaining how anxiety may result in physical symptoms such as tachycardia, tension headache, etc., and so reassure the patient as to the nature of any somatic manifestation she may have. Following this, one should point out that everyone has disabilities and the patient's predisposition to anxiety can be compared to that of a patient with a duodenal ulcer. Such patients have a perpetual disability at least as serious as that of our own patient. The difference is that the ulcer patient understands his disability, can control it, and certainly does not lose in confidence and self-respect to anything like the extent of the neurotic. If such a patient develops an exacerbation of his ulcer symptoms, he automatically asks himself why, sets about removing the cause, and at the same time takes antacids to control his symptoms.

At this stage it is helpful to draw a diagram of a balance. On one side of the balance the doctor writes down the various stresses which might accentuate the patient's symptoms and on the other, the tranquillisers or sedatives which might be used to control such symptoms.

The possible stresses which may make it more difficult for the patient to cope with life are as in Chapter 1 but should include a heading for "psychiatric illness" such as endogenous depression:

- *Physical*
  - *Physiological*, e.g. lack of sleep, fatigue
  - *Pathological*—illnesses and disabilities
- *Endocrine*
  - *Puberty. Climacteric*
  - *Premenstrual* phase
- *Psychogenic*
  - *Non-specific stresses*
  - *Stresses* particularly expected to affect the individual patient
- *Psychiatric illness*—e.g. endogenous depression

The patient will often recognise that her symptoms tend to be worse when she is physically tired or during the few days before the onset of her menses. The effects of other stresses in the patient's life history should than be noted and at the same time insight can be given into why some stresses will upset her more than other people, as they affect her in a particularly sensitive spot. Finally, the doctor himself must be aware of the degree to which even a mild depressive illness can affect the patient's ability to face up to the ordinary problems of life, the effect of such an illness in accentuating neurotic symptoms, and the relief which treatment of such an underlying depression will bring.

In this way the doctor should show the patient the rational way in which her symptoms develop and that relief will follow the removal of such stresses.

The patient should be taught to examine the possible causes of any increase in symptoms and then how to remove these stresses or adjust to them more satisfactorily. As soon as possible, the patient should start treating herself, when the doctor will direct that she takes "*up to* three tablets a day". When she has had a bad week, for instance, the doctor should ask her "why?" "What can she do to remove the stress?"

"How long will it take to do so?" and how she intends to adjust her sedation meanwhile. Only in this way can the patient develop confidence in managing and controlling her disability and so develop self-confidence and independence. Later the patient may only see the doctor infrequently, before finally becoming self-sufficient.

This is a basic plan which will have to be adapted to the individual patient depending on age, intelligence and symptomatology. Some patients reveal problems which may need considerable time and discussion on their own merits and others may need specialist psychiatric treatment of a psychotherapeutic or physical nature. However, in all cases the eventual aim is to enable the patient to accept and control her disability sufficiently for her to lead a successful and happy life.

Special psychotherapeutic techniques are mostly aimed at giving the patient insight into the origin of his problems and conflicts. The basis is a systematic and detailed investigation of the patient's personality and development with special reference to its emotional aspects. During this treatment the patient may, from time to time, transfer to the doctor the feelings he had for various important figures in his life and the doctor may then use this "transference" to correct any conflicts the patient has developed as a result of these relationships.

Psychoanalysis is the most intensive form of this treatment and very few patients are suitable. The best results are obtained with young intelligent patients without marked obsessional traits. More commonly, short-term insight therapy is practised and is aimed at dealing only with the most prominent difficulties. This modified treatment usually entails hourly sessions once weekly for three to six months and should be preceded or followed by the more usual type of supportive psychotherapy described above.

The Use of Drugs in Psychotherapy

These are particularly valuable when a patient has broken down under some acute psychogenic stress, and were widely used in the treatment of combat neuroses in the war. The aim is to get the patient to re-live the experience and to release the associated emotions. This is called an *abreaction.*

The Barbiturates. It is well known that under the influence of alcohol, tongues are loosened, critical judgement is suspended and confessions and secret aspirations often come pouring out. The accompanying emotional release is often followed by a relief of tension and depression. Alcohol here is acting as a sedative, releasing inhibitions and allaying any tension or anxiety which would otherwise be a bar to the expression of inner feelings. In therapy, barbiturate abreactions are of most use in those acute neurotic or hysterical states which have followed a particular stressful incident. The circumstances may be so uncomfortable that the patient finds difficulty in talking about them, or perhaps they may even be hidden by a period of amnesia. In these patients the relaxation and relief of anxiety often enables the patient to talk freely about the circumstances and their feelings about it. It is obvious that the technique is most useful in those patients of fairly good personality who have only broken down under some intolerable burden. It is of little use in the long-standing chronic neurotic.

The short-acting intravenous barbiturates are the drugs of choice and the most popular are thiopentone (pentothal) and sodium amylobarbitone. 0·5 g. thiopentone or 0·5 g. sodium amylobarbitone are dissolved in 10 ml. water and injected slowly into a vein a millilitre at a time. The therapist aims to produce a state of relaxed euphoria without confusion or slurring of speech. The amount of drug required and the speed of the injection varies from individual to individual and has to be judged from the patient's response. Leaving the needle in situ, and using one of these short-acting barbiturates, close control can be retained on the patient's state and excessive anxiety caused by the memories evoked is at once easily brought under control. The suggestibility which often accompanies the patient's relaxed state may be used therapeutically, especially in hysterics, and the abreaction followed by vigorous measures designed to consolidate any immediate improvement. Similarly in all cases, it is wise to follow up the abreaction with a face-to-face discussion of the material brought up during the abreaction, otherwise it may again become repressed.

Intravenous Methamphetamine. A fundamentally different technique consists in adding to and stimulating the patient's excitement. The benefit seems to lie in the non-specific release of emotions. This may accompany the description of some particularly traumatic experience but fantasy may sometimes be exploited to carry the emotion.

Methamphetamine should be given intravenously in a dose of 10–20 mg. though this can be increased gradually in subsequent interviews. Apart from the psychiatric response of the patient, methamphetamine causes an increase of the blood pressure and in elderly patients caution should be used when larger doses are contemplated. If it is thought that the patient becomes too tense during the interview, sodium amytal may be given in addition and a combination of these drugs can be very successful in experienced hands. Methamphetamine differs from the drugs so far considered in having a prolonged action. The therapist must be prepared to spend a full hour over the interview but on leaving the patient may still talk to all and sundry about his problems, and it is both wise and kind to allow the patient to rest quietly by himself for an hour or more after the interview is concluded. Even then the patient's mind often remains overactive and this may inhibit sleep unless an adequate hypnotic is prescribed.

Hallucinogenic Drugs. Recently the hallucinogenic drugs have been tried experimentally in the treatment of obsessional states which are notoriously resistant to the usual psychotherapeutic techniques. Lysergic acid diethylamide (LSD), psilocybin and phencyclidine (Sernyl) are the drugs in most use. They all have the tendency to uncover deep-seated memories and so allow the doctor to tackle them. These drugs should only be used with great care and usually on an in-patient basis.

General Management and Drug Therapy

The patient should be encouraged to lead as full a life as possible and to continue at work. Frequently the patient attributes his symptoms to his job and either asks whether he should change his work or, alternatively, asks his doctor to recommend him for a "light job". A change of job is seldom justified and it should be remembered that difficulty or dissatisfaction with the job is usually a symptom rather than the cause of the patient's illness. Further it is usually easier to do a job which a patient knows well than to start afresh in a new post.

Fresh air, good food and sleep are the commonsense but nevertheless frequently forgotten requirements of all patients. Under "fresh air" should also be included the normal interests and recreations of the patient, which should be kept up as far as possible as it is often hard for the patient to regain them once they are lost. If symptoms prohibit the patient carrying out his normal activities, drugs may be used to provide symptomatic relief. Since neurotic and personality disorders are liable to continue indefinitely, drugs should in general be used intermittently to control crises. However, a patient with pronounced anxiety symptoms may need regular sedation as lack of drugs can lead to a contraction of activities and eventually to a hermit-like existence. Provided the use of drugs is properly controlled and combined with adequate supportive psychotherapy, the dangers of addiction are not high and it is bad to deprive a markedly anxious patient of drugs without which they may be unable to work, leave the house, or undertake the minimum of normal social activities. Addiction, however, may well occur if the doctor prescribes drugs indiscriminately and fails to help the patient to tackle his symptoms in other ways.

Drugs are of only limited value in the treatment of neuroses and are chiefly of use in relieving states of tension and anxiety. Such drugs fall into one of two groups, the tranquillisers and the hypnotics (see Appendix 4). The minor tranquillisers were developed specifically for the relief of anxiety but with few exceptions are of little value and probably exert their effect through their weak hypnotic properties. However, chlordiazepoxide (Librium) 5–20 mg. tds., diazepam (Valium) 2–10 mg. tds., and have been shown in controlled trials to be superior to amylobarbitone in many cases. The major tranquillisers, whose main value lies in the treatment of psychoses, are often useful in smaller doses for the patient with anxiety. Many authorities, however, still prefer to use amylobarbitone, 45 mg. or sodium amylobarbitone 70–200 mg. to counter anxiety. They are quicker acting and there is no doubt as to their efficacy. Certainly they are the drugs of choice to relieve acute attacks. Patients may carry them to accomplish some task which they know will be beyond them without drugs, or to counter symptoms which arise unexpectedly. It is essential that the patient is instructed to take a fully effective dose. The knowledge that these drugs will counter any symptoms which may arise, adds to the patient's sense of security and itself diminishes anxiety, and patients may carry a few of these "confidence" pills with them for months without ever taking one. Probably the tranquillising drugs are best used for regular routine treatment, the hypnotics for occasional use or for the patient to carry for use in crises.

Neurotic, and especially anxious, patients are frequently underweight and simply correcting this may give considerable relief of symptoms. The more severe cases of this type may be admitted to hospital for treatment with "modified" insulin which not only increases the appetite but also affords sedation.

Sleep is important; anxious patients in particular have difficulty in falling asleep and their sleep is often restless and disturbed by dreams. Simple commonsense methods such as a warm drink before bedtime and hot water bottle should be tried to remedy the insomnia, but if these fail hypnotics should be given. The attainment of eight to ten hours sleep a night may give quite marked relief of symptoms, when the hypnotics may be gradually reduced.

In acute states of anxiety or tension a modified form of *continuous sleep therapy* can be instituted at home for a period of five to seven days. This almost always produces marked though temporary improvement, which enables more routine therapy to be instituted. The aim is to produce a state of drowsiness and intermittent sleep during the day and continuous sleep at night. It is quite safe to institute this degree of sedation at home, provided the patient is physically healthy and the relatives are trustworthy and able to remain with the patient. A combination of two drugs is necessary, a long-acting one to produce background sedation and a short-acting hypnotic to produce a sleep which will wear off after four hours to enable the patient to be fed and given toilet facilities. In states of marked anxiety larger doses than usual are necessary. A useful combination of drugs is thioridazine (Melleril) mg. 50–100 and sodium amylobarbitone 0·2–0·4 g., given at 8.0 a.m., 1.0 p.m. and 6.0 p.m. The hypnotic for night should usually include sodium barbitone. The doctor should keep a close eye on the patient as the dosage of drugs may have to be modified to suit the individual patient, and usually needs to be increased after the second or third day.

PREFRONTAL LEUCOTOMY

Prefrontal leucotomy was introduced into psychiatry by a Portuguese neurologist called Moniz, in 1935. He had observed that injuries to the frontal lobes often reduced anxiety and worry in the patient, and following experiments on apes, he showed that an operation designed to cut the white fibres underlying the cortex in the frontal lobes would reduce tension in psychiatrically ill patients, without undue interference with other mental capacities.

Indications

Experience has shown that the most satisfactory results are obtained in those patients in whom worry, tension and anxiety are prominent and these are the symptoms which are especially relieved by the operation.

Obsessive-compulsive Disorders. Some of these patients are most resistant to more conservative treatments and live a most miserable life, tortured by the tension and anxiety associated with their compulsive obsessions and ruminations. In satisfactory cases, prefrontal leucotomy relieves the tension and anxiety and the obsessive-compulsive symptoms become less pronounced and more easily controlled.

Certain cases of *depression* (Chapter 7) and *schizophrenia* (Chapter 8) associated with tension and anxiety may be suitable for leucotomy as may patients who have become depressed and demoralised by prolonged and intractable pain.

Complications and Undesirable Effects

Undesirable effects of leucotomy include "negative" features such as apathy and, associated with this, a lack of initiative and perseverance, and "positive" features due to a lack of normal control. The latter may be noticeable merely by a certain tactlessness or outspokenness but serious aggressive outbursts of temper may occur in patients whose normal personality had shown aggressive traits. The more drastic the leucotomy, the more these undesirable features are likely to occur; nowadays the modified or rostral operation is the one most preferred. In selecting patients for operation it should be kept in mind that those whose normal personality showed little drive or initiative are likely to be apathetic after leucotomy. On the other hand, the operation may remove what little control a previously aggressive and psychopathic personality possessed.

The operative mortality is about 2–3%. The majority of deaths occur from cerebral hæmorrhage, particularly in hypertensive patients.

Operation

Briefly, a small hole is made on either side of the skull so that the cortex of the prefrontal areas is exposed. A blunt instrument such as a brain needle (to avoid the risk of hæmorrhage through cutting the blood vessels) is introduced into the brain substance and is then swept upwards and downwards so as to divide the white matter lying under the cortex. This procedure is carried out first on one side and then on the other. The skin incision is small, and the scar usually becomes invisible when the hair has grown again.

Subsequent Treatment

In some patients a change takes place almost immediately after the operation, in others it seems to have little noticeable effect and beneficial effects may only occur many months later. One thing is certain—the ultimate success of the operation depends to a large degree on the management of the patient in the weeks and months following. The patient may voice the same delusions or perform the same irrational acts as before his operation, but he is no longer so distressed or worried by them. He is therefore more responsive to external stimuli. On the other hand there is some loss of initiative and originality and efforts must be made to re-educate the patient to normal ways and habits.

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Chapter 6

PERSONALITY DISORDERS (Continued)

PSYCHOPATHIC PERSONALITY

Psychopathic personality is a term so ill-defined that eminent medical and legal authorities disagree as to its meaning. Henderson's definition is probably the most widely accepted and is partly one of exclusion. He defines a psychopath as a *person who has had difficulty in social adjustment over many years or a lifetime and yet is not of defective intelligence, does not have a structural disorder of the brain or epilepsy, nor conforms with the syndromes of neurosis or psychosis.* A psychopathic disorder is defined in the Mental Health Act as "a persistent disorder or disability of mind (whether or not including subnormality of intelligence) which results in abnormally aggressive or seriously irresponsible conduct on the part of the patient. . . ." This definition is purposely vague and malleable and though scientifically poor, it is practical in a legal sense and can be adapted to changes in social thought and medical knowledge.

Although psychopathy is difficult to define, the two main characteristics of these patients are clear. First, there is an abnormality of the personality such that the individual is unable to cope with environmental difficulties. Second, this inability to adjust results in disorders of behaviour of which the patient does not complain—though society might. Other characteristic features are that these patients live entirely for the present, they are unable to plan or sacrifice for the future, nor are they able to learn from experience of the past. They are unable to make close or lasting friends and although presenting a pathetic and pleading appearance to the doctor, will seldom continue to attend regularly for treatment. The reason they come to doctors is because they frequently develop secondary symptoms. In particular, depression is very common and fluctuates directly with environmental difficulties. Suicide is not uncommon.

As can be imagined, there are innumerable varieties and degrees of psychopathic personality, but the main types of patient can be classified by their behaviour into:

(1) Passive and inadequate.
(2) Aggressive.
(3) Creative.

The commonest group seen in medical practice are undoubtedly the group of inadequate "psychopaths". These tend to drift in and out of jobs, into trouble, drink, and occasionally drug addiction. They are responsible for many "problem families" and frequently become a burden on the community and the National Assistance Board. Minor somatic complaints, depression and anxiety symptoms are common, and fluctuate with environmental circumstances. Suicide does occur, but symptoms are often exaggerated and there is a lack of drive and will to improve themselves which is disheartening for all concerned. The aggressive psychopaths are subject to episodes of extreme violence which are usually unpremeditated. The creative psychopath may be a genius type but is often unusual in other ways too. The single-minded determination he brings to his endeavours often leads to a ruthless and maybe irresponsible attitude to society and in particular to his family.

An E.E.G. abnormality is present in two-thirds of aggressive psychopaths, and one-third of inadequate psychopaths compared with 15% of normal controls. In many cases, the abnormality is characterised by an excess of 4–7 c/sec. activity, which is bilaterally synchronous and mainly post central. In other words, the pattern is immature and similar to that of a child of less than 12 years of age. In such cases, maturation does lead to some improvement in the disorder and by 30–40 years of age the patient with previously uncontrolled aggression may have developed the self-control of a late adolescent.

Treatment

Specific treatment is disappointing, though claims have recently been made that group therapy is of some benefit. Drugs are likewise of little use.

ALCOHOLISM

There are four main groups of alcoholics.

1. *Primary Addiction* is very rare and can be recognised when a patient has his first drink and suddenly realises that alcohol is his life. These patients may go to any lengths to get alcohol, even to the extent of licking tins of metal polish.
2. *Habit*, usually stemming from local or racial custom.
3. *Occupational* as in publicans and salesmen where drink is closely associated with success in the job.
4. *Symptomatic*. Here the alcoholism may be due to an inadequate personality, to provide relief from domestic or other environmental difficulties or as a relief from symptoms of depression or anxiety due either to a neurosis or true affective illness, the latter in fact accounting for many cases of so-called dipsomania. The commonest alcoholic has a combination of ætiological factors. An attempt should be made in all cases to find the underlying causes and treat these at the same time as withdrawing the alcohol.

Psychiatric Complications

A general demoralisation and deterioration of the personality is common in chronic alcoholism and may progress to dementia. The patient's selfishness, egocentricity and occasional brutality is in contrast to his superficial plausibility. *Jealousy* is a not uncommon development, perhaps due in part to sexual impotence and general domestic disharmony. As in other states of jealousy, the patient collects fragments of so-called evidence and becomes convinced of his wife's infidelity. As his mental drive becomes lessened with the advance of his alcoholism, he may become less concerned with his delusions of jealousy, but the wife is always in danger of physical assault and even murder.

Affect is lost, ambition disappears, and the patient tends to become careless of his appearance and neglectful of his family. There is an increasing paucity of ideas and a growing incapacity for sustained attention. Memory begins to fail and all the features of *dementia* may gradually appear.

Other complications of alcoholism can be distinguished as those due to the direct effect of the poison and those due to a secondary nutritional deficiency.

Direct Toxic Action

Tremor. Within 12–24 hours after stopping alcohol, the patient feels uneasy, slightly anxious and tense, with a tremor of his hands. This is commonly called "the shakes" and characteristically comes on first thing in the morning after a night of abstinence. The alcoholic soon finds that this state is readily relieved by taking more alcohol.

Epileptic fits may occur in which case they usually come on about 48 hours after stopping drinking.

Delirium tremens is commoner in men and rarely occurs in a patient who has been drinking for less than five years. It develops from the "early morning shakes" and manifests itself 72–96 hours after stopping drinking. In some cases it may be precipitated by an intercurrent infection such as pneumonia, though the associated abstinence may still be the root cause. The features are those of a delirium. Consciousness is clouded, as a result of which the patient is disoriented for time, place and person, he misinterprets visual perceptions, and at the same time he is suggestible and can be encouraged to read from a blank sheet of paper. As with all organic states, the patient is worse in the evening, particularly in the dusk when visual perceptions are less clear. At this time he becomes increasingly agitated, tremulous and restless. He is quite disoriented and begins to misinterpret objects he dimly sees in the corner of the room or the patterns on the wallpaper. The objects appear to move, and with his clouded consciousness, suggestibility and already anxious state of mind, he misinterprets them as moving and menacing. This state of continual fear and restlessness may lead to exhaustion and even death in a physically debilitated patient.

TABLE IV. Comparing Withdrawal Symptoms following Chronic Intoxication with Alcohol and Barbiturates

	Period of Withdrawal in Hours	
	Alcohol	Barbiturates
Tremor and anxiety	12–24	8–36
Convulsions	48	24–78
Delirium	72–96	24–78

Treatment of Delirium Tremens

All these symptoms are due to the withdrawal of alcohol and are almost identical to the withdrawal effects in patients addicted to barbiturates or other C.N.S. depressants (Table IV). Obviously there can be no excuse for giving such a patient more alcohol. The patient must be sedated adequately. This is best done with oral paraldehyde which is safe and should be given in increasing doses, sufficient to control completely the patient's anxiety and allow sleep. Other drugs which may be used are chlorpromazine and barbiturates, particularly in combination.

Indirect Effects—Nutritional

These stem from a multiple vitamin deficiency, but particularly a deficiency of thiamin (vitamin B_1). There is always a long history of anorexia and in these patients drinking frequently starts first thing in the morning. Further, they are usually steady drinkers rather than bout drinkers, as the latter are usually protected from severe nutritional disorders by eating between bouts. There is an equal distribution between the sexes.

1. *Hepatic Cirrhosis.* There is a well-founded clinical impression that hepatic cirrhosis is far commoner in steady drinkers with nutritional disorders than in bout drinkers. However, a direct toxic effect of alcohol on the liver may well play a part in the ætiology.

2. *Peripheral Neuritis*, particularly involving the lower limbs, is probably mainly attributable to lack of vitamin B_1 which is a coenzyme involved in carbohydrate metabolism at the pyruvic acid stage. Intake of alcohol increases the need for this coenzyme by its own metabolic requirements. This fact can be used for diagnosis in such cases, as pyruvic acid rises abnormally high—following a glucose tolerance test. Peripheral neuritis is not a direct toxic effect of alcohol for similar rates of improvement occur during treatment with vitamin supplements whether or not alcohol is given in addition.

3. *Wernicke's Encephalopathy.* This is an acute and extremely severe condition and again this is thought to be due to vitamin B_1 deficiency. Symptoms are those of an encephalopathy, with confusion, disorientation, and maybe coma. Nystagmus is almost constant. Cranial nerve palsies are common, particularly involving the third nerve. With early treatment recovery may be complete but many cases are left with an irreversible Korsakoff's syndrome. Cases coming to post mortem are frequently found to have hæmorrhages in the hypothalamic region, especially the mammillary bodies.

4. *Korsakoff's Syndrome.* Although this may follow Wernicke's encephalopathy, it usually develops spontaneously. The fundamental defect is an inability to learn; thus any experience is immediately forgotten. In the pure form which is uncommon there is no dementia and memories for past events remain intact. Patients present with apparent loss of recent memory, often from a particular date; in fact the defect is that they have never been able to retain any experience or happening since that time.

In some patients, depending on their degree of insight and especially if there is a slight degree of complicating dementia, they may attempt to fill in the gaps in their memory by false reminiscences. This is called confabulation. The original description by Korsakoff included the triad amnesia, confabulation and peripheral neuritis. Patients should be treated with vitamin supplements, but it is rare for improvement to occur.

Other Complications of Alcoholism

Alcoholic Hallucinosis. It is uncertain to what degree this is due to direct toxic effects of alcohol or to a secondary nutritional disorder. The incidence is similar to that of delirium tremens and, like that disorder, is commoner in men. There is always a long history of alcoholism and the attack comes on after 24–48 hours of abstinence following a bout of heavy drinking. The hallucinosis usually lasts for a matter of days but may persist for months or even run into an illness difficult to distinguish from schizophrenia.

The diagnostic features are:

(1) Non-schizoid personality.

(2) A long history of alcoholism.

(3) Auditory hallucinations, the content of which may be characterised by

 (*a*) gross obscenities

 (*b*) voices acting for the prosecution and defence as if the patient is on trial.

(4) Lack of any fundamental schizophrenic features, such as disorders of thought or affect.

General Treatment of Alcoholism

Once an alcoholic, always an alcoholic; even after five years' abstinence the patient is in danger of relapse if he has another drink. *Attempts to moderate drinking are usually a waste of time.* The first essential is to persuade the patient that alcohol is his poison and must be forsworn entirely. The main efforts of treatment should be directed to supporting the patient in his endeavours. He should be advised to join Alcoholics Anonymous (A.A.) and given psychotherapy to lessen any difficulties in adjustment, domestic disharmony, etc., which may increase the temptation. If his job brings him into contact with drink he should be advised to change it.

Specific aids to abstinence are only of use when related to the above. These include:

1. *Prolonged Admission to Hospital* to enforce abstinence and initiate rehabilitation.

2. *Aversion Therapy*, where the aim is to develop an association in the patient's mind between alcohol and a feeling of nausea, induced by an injection of apomorphine.

3. *Antabuse* (diethylthiuram-disulphide) therapy. Antabuse should be taken regularly in a dose 0·25–0·5 g. daily. It has no effect by itself, but if alcohol is taken in addition, the patient suffers an unpleasant reaction. Antabuse interferes with the metabolism of any alcohol which is taken, aldehydes accumulate, and these cause an unpleasant reaction with nausea and vomiting. Antabuse reactions may result in cardiovascular collapse and for this reason Antabuse should only be given to physically healthy patients who are fairly reliable. It is a good rule to give the patient an alcohol reaction under medical supervision. This enables the doctor to make sure that any reaction, precipitated by the patient himself, will not be dangerous, or if the reaction is not marked enough, to increase the dose of Antabuse. Antabuse will not stop a patient returning to drink but will make him think twice as, once he has taken his tablet, he must wait 24–48 hours before he can drink in safety. Recently Abstem (calcium carbimide) in a dosage of 50–100 mg. daily has been introduced as an alternative to Antabuse, which occasionally results in impotence and peripheral neuritis.

DRUG ADDICTION

For a patient to be called an addict, he must not only be dependent on a drug, but must suffer withdrawal effects when it is stopped. A property common to all drugs of addiction is that the patient develops tolerance to them and the dosage has to be increased steadily to produce the same effect.

In general the causes of drug addiction are the same as those of alcoholism, though personality disorders of an inadequate type are much the most common. The unpleasant withdrawal effects of the drug, the patient's experience of its euphoriant properties, and the original inadequate personality, often showing moral or general deterioration because of the addiction, all make for a high relapse rate. Withdrawal should be carried out under heavy sedation and general supportive measures continued for at least a year.

Addiction to amphetamine and its derivatives has become common, some patients taking up to 1000 mg. daily in tablet form and others chewing the contents of "benzedrine inhalers". Acute withdrawal effects may be minimal but a state of apathy often persists for 6–12 months and may well be a true withdrawal symptom. In some patients a schizophrenic-like psychosis may develop.

SEXUAL ANOMALIES

With the exception of homosexuality, transvestitism, and some cases of exhibitionism, most sexual anomalies are symptomatic of some more fundamental disturbance and so will not be dealt with individually. Disorders such as frigidity, premature ejaculation and impotence are usually the result of an underlying insecurity and anxiety. There is frequently difficulty in interpersonal relations and this may be accentuated by marriage to a more dominant and assertive partner or one who is lacking in demonstrative affection. On the other hand, sado-masochistic feelings and other perversions may be part of a psychopathic personality.

HOMOSEXUALITY

Ætiology

From a practical point of view, homosexuality can be divided into three types:

(1) "Normal" homosexuality.
(2) "Facultative" homosexuality.
(3) "True" homosexuality.

Homosexual feelings are common in many people at some stage in life and particularly so in adolescence. Occasionally a youth with an anxiety state may present to the doctor stating that he thinks he may be a homosexual. Patients of this type must obviously be treated as straightforward anxiety states and reassured as to their fears. A few people, on the other hand, have stronger homosexual feelings and can adapt to either a homo- or hetero-sexual life. These are the only cases of homosexuality which can be "cured" by psychotherapy or at least be helped to strengthen and develop their heterosexual feelings. They should be referred for specialist psychiatric treatment.

True homosexuals have either only very weak or, more commonly, no heterosexual feelings at all. External sexual characteristics and endocrines are normal. Most cases are probably genetically determined. Kallmann found that the uniovular twins of homosexual probands were not only also homosexual in every case, but that the degree of homosexuality on the Kinsey rating agreed closely with that of the partner. Binovular twins showed little more tendency to homosexuality than ordinary brothers. If the hereditary factor was transmitted by the usual mendelian mechanisms, homosexuals would be distributed at random throughout the family sibship. However, it has recently been shown that homosexuals tend to be born later in the sibship, that the mothers are older and at the same time show a greater age scatter than mothers of normal controls. These findings are strikingly similar to those in mongolism and suggest that the ætiology is heterogeneous but that many cases may be due to a chromosomal abnormality, perhaps originating in the mother's ovum. Chromosomal studies have failed to demonstrate any abnormality in homosexuals, but as present methods can only detect abnormalities involving the addition or loss of a complete or large part of a chromosome, this is not surprising.

Symptoms

Apart from their sexual anomaly, homosexuals are otherwise normal. However, the effects of being a homosexual in a heterosexual society frequently leads to neurotic symptoms.

When one considers how many aspects of life have a heterosexual flavour (newspapers, novels, cinema, T.V. and everyday conversation) it is only too understandable how lonely and isolated a homosexual feels. This is particularly so when homosexuality is not only outlawed by society but made a criminal offence. This means that a homosexual runs a risk of exposure, ostracism, and loss of his job if he mixes with men of his own feelings. The fact that homosexuality, even in private, is a criminal offence, increases the risk of blackmail and so debars him from many responsible positions. That these factors are important in the ætiology of the secondary neurotic symptoms is suggested by the infrequency with which female homosexuals come to psychiatrists. Lesbianism is not a criminal offence, and close relationships and affection between women are socially acceptable, as are women who assume masculine jobs and activities.

Treatment

There is no treatment which can cure the underlying homosexuality, but rather the doctor's efforts should be directed to helping the patient to adjust and lead a successful and enjoyable life despite his sexual anomaly.

The immediate task is to make sure he does not get in trouble with the police, by importuning or otherwise committing a nuisance. If at times his sexual feelings seem liable to overcome his self-control, stilbœstrol or ethinyl œstradiol may be used to overcome such a crisis. This lessens sexual drive but does not alter its direction and therefore is no use in long-term therapy.

Psychotherapy directed towards helping adjustment, should include advice about jobs and social activities aimed not only at giving the patient a purpose and interest in life, but perhaps enabling him to direct his feelings into socially acceptable channels.

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Chapter 7

AFFECTIVE ILLNESSES

ENDOGENOUS DEPRESSION AND MANIA

These are disorders of the affect or emotions and involve all components of mood, with the emergence of anxiety and irritability in addition to depression or elation. They are illnesses in the same way that pneumonia is an illness. The patient is perfectly healthy and stable until struck down by an ailment affecting his mood and on recovery is perfectly well again, though liable to a further attack just as is a patient with pneumonia. Chronic bronchitis can be taken as analogous to a neurosis in that the lungs are permanently susceptible to recurrent infections and the patient has exacerbations in response to attacks of coryza, exposure to fog, etc.

The severity of the condition varies enormously and so the commonly quoted 1% incidence is meaningless. Minor attacks are frequently unrecognised, for example symptoms of tension, irritability, and tearfulness at the menopause may be accepted as a normal part of the "change". Women are more susceptible than men and there is an especially high incidence in late Spring and early Summer, which is true of mental illness in general. An affective psychosis is rare before puberty but during adolescence the illness becomes more frequent and the incidence increases with age to a peak between 45 and 55 years.

ÆTIOLOGY

Genetic Factors

All investigators comment on the greater incidence of affective illness in families of patients with a manic-depressive psychosis. Approximately 10% of parents and children in such families manifest the disorder and siblings also show a similar increased incidence. Twin studies confirm that genetic factors are involved.

The likely mechanism of transmission is by an autosomal dominant of weak and variable expression. This means that a predisposition to an affective illness is transmitted in a dominant manner, but the actual manifestation of the illness will depend not only on the specific genetic factors but on general personality assets and defects, on environmental circumstances and perhaps on other genetic factors which may modify the specific abnormality. In fact, this is common to most genetic abnormalities. The consequences of the genetic abnormality of galactosæmia only manifest themselves when milk is taken, hæmophilics bleed only with trauma, and a deficiency of pseudocholinesterase gives rise to symptoms only if the patient is given scoline as a muscle relaxant.

This theory does not suggest that the same gene is responsible in every patient. In fact affective illnesses may indeed be genetically heterogenous, in which case the specific genes may vary in their degree of manifestation or even in their mode of transmission.

Biochemical

Since genes are organic chemicals and exert their action through enzymes, it follows that affective illnesses are likely to be biochemical disturbances, affecting the control of mood. That such biochemical disturbances can be precipitated by emotional or environmental stresses or on the other hand modified by relieving such stress, is to be expected. Similar instances are common in all branches of medicine; the effect of stress on ovarian function and the stabilisation of diabetes are examples.

The nature of the biochemical defect is unknown but the possible effect on mood of changes in the brain concentrations of certain monoamines is of great theoretical interest and has led to big advances in therapy.

5-Hydroxytryptamine (5HT) and noradrenaline are two monoamines which are thought to be necessary for the normal functioning of the brain. However, many more monoamines are known and presumably many yet undiscovered and some of these may turn out to be even more important than noradrenaline and 5HT. Monoamine oxidase is an enzyme which is concerned in the metabolism of this group of compounds, and the monoamine oxidase inhibitors are drugs which inactivate this enzyme and so interfere with the metabolism of the monoamines.

You may picture these important monoamines as being stored in binding sites in the brain cells, mainly in the midbrain. In the cell they are inactive but protected from the enzyme monoamine oxidase. They only exert their action when released as needed. They are then immediately inactivated, either by monoamine oxidase, or by re-binding to the granules (Fig. 4).

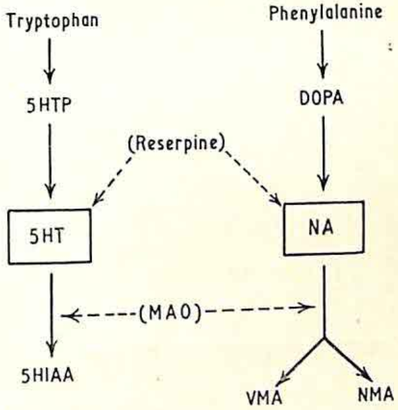

FIG. 4. Illustrating the metabolism of 5-hydroxytryptamine (5HT) and noradrenaline (NA) and the sites of action of reserpine and monoamine oxidase (MAO).

In the experimental animal it has been shown that reserpine releases 5HT and noradrenaline from binding sites, so exposing them to monoamine oxidase. Shortly after the animal has been given reserpine, it is found that practically all the 5HT and noradrenaline have disappeared from the brain and at the same time as this happens, the animal's behaviour changes to a state which is compatible with one of profound depression. Conversely, the brain concentrations of 5HT and noradrenaline can be increased by administering their precursors, 5-hydroxytryptophan (5HTP) and 3,4-dihydroxyphenylalanine (DOPA). When the concentration of the amines has increased sufficiently, the animal's behaviour changes, this time to a state of excitement. Iproniazid was the first drug shown to have a marked inhibitory effect on the enzyme monoamine oxidase. By inhibiting the enzyme, the metabolism of 5HT and noradrenaline is interfered with and their brain concentrations increase. Again, this increase in brain concentrations of monoamines, this time caused by decreasing their destruction, results in a state of excitation.

Since this early work was done, the picture has become more complicated but from a practical point of view one can assume that when the "active" form of the amine becomes less available, the animal becomes "depressed". When the enzyme monoamine oxidase is inhibited and the brain concentrations of amines increase to fill the binding sites in the cells to capacity, there is a consequent increase in active amines and the animal becomes excited.

In man, it was found that reserpine tended to produce depression in patients with hypertension and conversely it is now well known that monoamine oxidase inhibitors afford symptomatic relief to many patients with depression. However, this does not mean that depression in clinical practice is due to a deficiency in the brain of one of these monoamines. There is no direct evidence for this whatsoever.

The imipramine group of drugs act in quite a different way. These drugs reverse the depressive-like condition in animals produced by reserpine and result in a state resembling excitement. However, the brain concentration of amines remains in the depleted state typical of a reserpinised animal. The mode of action of this type of anti-depressant is quite unknown.

What is important is that neither the amine oxidase inhibitors nor the imipramine group of drugs are general euphoriants. Some patients are dramatically improved and some unaffected. Some patients respond to one type of drug and not to the other. Recently it has been suggested that the response to a particular type of anti-depressant may depend on the fundamental biochemical abnormality, the predisposition to which is genetically determined. Thus, depression of one genetic type would respond to amine oxidase inhibitors, whereas a clinically similar illness due to a different genetic abnormality may respond only to the imipramine group of anti-depressants. The suggestion that the response to anti-depressants is dependent on the genetic basis of the illness is supported by the finding that first degree relatives who become depressed tend to respond to anti-depressants in a similar manner to the original patient.

Personality

Although the personality may be quite normal, a predisposition to affective illness may show in two ways. First, the mood of the patient may by cyclical, depressive or hypomanic. The mood in the cyclothymic type of patient may be generally normal but subject to spontaneous changes into one of enthusiasm and elation or, more commonly, into a mild degree of depression. This may last from a few days to several weeks and come on regularly every few months or year or be quite irregular. The patient may recognise this change of mood for what it is or go to the doctor for a "tonic" complaining of lassitude, irritability, loss of interest and a general run-down feeling. The other two types of personality are well recognised as the eternal pessimist on the one hand, and the energetic, enthusiastic optimist on the other. There is some correlation between the different varieties of personality and the types of affective illness which the patient develops, but it will be seen that depressive illnesses are commonest in all personality types (Table V).

① Cyc

The second important feature of the personality is an excessive lability of mood. There is a tendency for these patients to fluctuate with their surroundings and in many instances to pass suddenly from one mood into another far removed from it. It should be emphasised, however, that stresses particularly upsetting to the individual can often be identified by his undue

② Lab

TABLE V. Relationship between Personality and Psychosis
(From Kraepelin, modified.).

Personality	Psychosis		
	Depressive %	Manic %	Manic-depressive %
Depressive	64	8	27
Hypomanic	35	23	41
Cyclothymic	35	11	53

response to these, in comparison to other less specifically stressful circumstances, and this may prove a valuable lead in elucidating any psychogenic difficulties which may have precipitated or be accentuating his present endogenous illness.

Physically, the patient is often of a pyknic type with stocky build, a short thick neck, slightly-built shoulder girdle, and large visceral cavities with a tendency to fat on the trunk.

Precipitating Factors

Sometimes an affective illness will appear to develop spontaneously. In the majority of cases, however, there does seem to be some factor which causes the underlying predisposition to become manifest. This other factor may simply precipitate the illness which, once developed, continues on its own momentum, or it may persist and modify the usual course of the illness.

Common stresses which should be looked for are discussed in Chapter 1, and frequently two or more act together in the same patient. Particularly important in affective illness are *endocrine changes*. It has already been stated that manic-depressive disorders are rare before puberty and have a peak at the menopause. In some predisposed women, minor degrees of depression occur in the pre-menstrual phase, and in the puerperium not only may a major affective illness occur but minor degrees of depression and anxiety are common, in addition to the enhanced emotional lability which is so frequent as to be almost the norm. *Physical disorders* are a particularly common cause in patients who become depressed for the first time in their life after the age of sixty years. Certainly such physical abnormalities are far commoner in patients of this group when compared with patients of similar age who have had several depressions before. The physical disorder may be relatively mild, e.g. arthritis, moderate anæmia or bronchitis, but makes it more difficult for the patient to cope with life and perhaps, with other stresses, may tip the balance and precipitate a depressive illness.

When the precipitating factors are particularly strong and perhaps influence the course of the illness, the depression is frequently termed a "*reactive depression*". The extent to which the illness is precipitated by, or a reaction to, environmental stress is a matter of degree and in practice all cases are partly endogenous and partly reactive. In contrast to a typical endogenous illness, an extreme form of reactive depression would be a patient with only slight evidence of a predisposition to depression but who becomes ill in response to a severe environmental stress. The patient's symptoms are closely related to the precipitating stress and the patient tends to remain depressed until the stress has been removed or he makes an adequate adjustment to it. Even in the more endogenous affective illnesses, it is essential to seek out physical, psychogenic, or environmental factors which may be at work. Not only is a knowledge of these factors important in the correct handling of the present illness but it will be the basis of any attempt to prevent future recurrence.

SYMPTOMS OF DEPRESSION

The term "depression" for a deflated and lowered mood is unfortunate because, although the commonest and most important symptom, it may not be obvious and may take the form of a lack of enjoyment. An affective illness involves all elements of mood; anxiety and irritability are almost as common as depression, while "negative" symptoms such as apathy and loss of interest and enjoyment, lassitude and sleep dysrhythmias are generally present and well marked (Table VI).

TABLE VI. Illustrating the Common Symptoms of a Depressive Illness

Positive Symptoms	*"Negative" Symptoms*
Depression	Loss of interest
Psychomotor retardation	,, ,, Concentration
Anxiety and agitation	,, ,, Decisiveness
Irritability	,, ,, Self-control
Feeling of inferiority and loss of confidence	,, ,, Energy
	,, ,, Appetite
Introversion	,, ,, Taste
Delusions	,, ,, Sleep
Self-reproach	,, ,, Weight
Hypochondriasis	,, ,, Libido
Ideas of reference	Menstrual Irregularities or Amenorrhœa
Hallucinations	

The primary abnormality is a change of mood, the way in which it manifests itself depends not only on the severity of the illness but on the patient's previous personality, age and general physical health, the immediate environment, etc. Thus the manifestations of an affective illness are legion and differ in every patient. The features which all patients have in common and which must all be present for the diagnosis to be made are:

(1) Evidence of an illness. A change from a relatively stable person to one who is disabled out of proportion to any environmental stress which might have occurred.

(2) The presence of a depressed or deflated mood.

(3) The ability to explain all the symptoms on a depressive basis, taking into account the patient's previous personality, age, general physical health, immediate environment, etc.

MILD DEGREES OF DEPRESSION

These are frequently misdiagnosed and mistreated, yet are very common, give rise to personal distress out of all proportion to the severity of the illness and frequently respond dramatically to treatment. The patient may present with symptoms of depression but these may not be obvious. The complaint may be of some bodily disorder, perhaps of a hypochondriacal nature due to muscle tension, or simply of being "run down" and needing a tonic. Lack of concentration or simply dissatisfaction with his job, insomnia, worry and anxiety out of proportion to his difficulties or domestic troubles are other frequent complaints. Some degree of irritability, anxiety or tension are common, but "negative" symptoms predominate. The normal vitality and optimism is lacking and the patient rarely looks forward to things. He first loses his normal interests, particularly active social engagements, later reading, and only finally the most passive ones, such as T.V. In general he lacks normal enjoyment, life becomes monotonous and his attitude is one of resignation, punctuated by a greater or lesser degree of irritability. Energy is reduced, particularly in the mornings, taste is often blunted and appetite impaired. Sleep is frequently affected; the greater the degree of anxiety the more likely is there to be difficulty in falling asleep, and sleep may be restless. The more obvious the depression, the greater the tendency for the patient to wake early. The two types of sleep disturbance are frequently associated. Libido is often reduced and some degree of impotence may occur. Menstrual irregularities or even amenorrhœa may be present, though this is commoner in the more severe forms of the illness.

Diagnosis depends first on recognising the presence of an illness, and that there has been a change from the patient's normal state and secondly, having the possibility of a depressive illness in mind. When tension, anxiety or irritability are prominent, the commonest mistake is to diagnose "neurosis" This error is made partly because it is not generally recognised that anxiety is a common manifestation of depressive illness, and partly because the doctor does not make a proper assessment of the patient's past history and personality. For instance, a woman who has been stable until forty or fifty years of age should never be diagnosed "neurotic", yet the diagnosis is frequently made simply because of the development of hypochondriacal symptoms and anxiety. Patients with predominantly "negative" symptoms such as lassitude, loss of interest and enjoyment, and perhaps menstrual irregularities are frequently misdiagnosed as suffering from anæmia or hypothyroidism, while "night starvation", "latent constipation", and "nervous exhaustion" are more popular diagnoses.

THE MORE SEVERE DEPRESSIVE ILLNESSES

These are rarely problems of diagnosis and "positive" symptoms predominate. Here again, anxiety is often a prominent feature, particularly so in illnesses during the involutional period of life.

Behaviour and thinking are always disturbed. *Retardation* may be apparent not only in the slow monotonous speech, but in the paucity of thought content which is centred round the patient's depressive ideas. Associated with this mental retardation is a general slowing up of physical movements which in extreme cases ends in stupor. *The greater the degree of anxiety, however, the less apparent is the retardation.* The patient's anxiety is expressed in repetitive requests for reassurance and the rapid speech may mask the limited range of thought. Allied to this, there is a motor agitation which ranges from simple fidgetiness, to wringing of the hands, or to such constant restlessness that the patient cannot settle to eat and physical exhaustion may ensue. The mental and physical agitation is entirely centred around the depressive ideas, to the eventual exclusion of purposive thought and decisiveness so that, as in the retarded state, the patient becomes unable to deal with impersonal topics, decisions are dodged, and the range of thought contracts to the extent that he is entirely bound up with his own depressive ideas.

Delusions occur in proportion to the degree of affective change. The primary changes is one of mood but the form which the delusions take depends partly on the patient's personality and life experiences. Among the infinite variations one can separate ideas of guilt and those of bodily disorder. Either of these may have a paranoid colouring.

Feelings of guilt and unworthiness are common and may at times become grandiose, the patient claiming that no-one has ever been as wicked as he. Peccadilloes or graver lapses assume enormous proportions for which there can be no forgiveness. A mother may conceive that her children are suffering or maybe dying from lack of proper care; she may feel a burden on her family, dragging them with her into degradation or depravity; her suicide may seem their only hope. These delusions usually concern the future too, which is described as black with no glimmer of hope; secular crimes will be punished by imprisonment or death, wickedness by eternal damnation. *Paranoid* feelings are common. The patient hears isolated words such as "prostitute", "children" or "prison" and at once assumes that people are discussing her unworthiness. She may feel people avoid her, watch, and even follow her, but although she may resent this, she accepts it all as her deserts. *Hallucinations* are uncommon but, if they do occur, are always in keeping with the depressive mood. Voices may urge the patient to commit suicide, she may hear the crying of her child or, in paranoid cases, the voices of people making derisive remarks.

Ideas of bodily disorder may originate from the lassitude, weakness, anorexia, and other general physical disturbances associated with an affective illness. In other cases the ideas may be determined by feelings of depersonalisation. Fears of cancer grow into a conviction of having the most horrible and incurable disease. A pimple may be taken as sign of syphilis, with which the patient has infected his children, all of whom will suffer loathsome damage to their bodies. *Paranoid* interpretations are again not uncommon and the patient may construe chance remarks as referring to the foul smell which he emanates, or doctor's visits as attempts at euthanasia.

Age considerably influences the manifestations of a depressive illness. The *menopausal period* of life is frequently associated with a sexual colouring to the symptoms. The patient may feel herself becoming unattractive and suspect her husband of infidelity. Alternatively, a spinster may be tortured by sexual feeling for her vicar or by temptations to masturbate. In the *involutional period* (see below), anxiety and bizarre hypochondriacal delusions are particularly prominent and may assume grandiose proportions. The patient may complain that his bowels have been blocked for months or that they have entirely rotted away. Similarly, he may believe that his brain has disappeared. Admixtures with sexual themes are common, when delusions involving torture, violence, wholesale prostitution and the like, may occur. Finally, as the *senium* approaches, delusions tend to concern the patient's home and possessions, which he feels he has lost or are being taken from him.

Other symptoms are similar, though more severe, to those described under "Mild Depressions". Appetite is poor, taste impaired, and weight is lost. This, together with almost constant disturbance of sleep may, in the agitated patient, lead to physical debility or exhaustion. Libido is lost, and amenorrhœa or menstrual irregularities are common.

INVOLUTIONAL MELANCHOLIA

This describes a type of depression which comes on for the first time in the involutional period of life and is associated with a previously rigid, obsessional and anxious personality. The syndrome is characterised by hypochondriacal ideas, marked anxiety and agitation, and feelings of depersonalisation. This combination leads to grotesque and often nihilistic delusions, often of a grandiose type. Thus the patient may state that he has no brain, his bowels have not been opened for years or have rotted away, or that he has a terrible disease and that his urine is causing the deaths of countless innocent people. Without treatment the course is prolonged, but the illness responds well to electroconvulsive therapy in 90% of cases. Suicidal impulses may be prominent.

Although useful for descriptive purposes, it is doubtful whether involutional melancholia is an entity; rather, it is probable that this striking clinical picture is produced by a particular combination of personality features and age on a simple depressive illness. Genetic investigations in the past have tended to show an admixture of schizophrenic illness in the families of patients with "involutional melancholia". However, the differential diagnosis between schizophrenia and involutional melancholia can be difficult and these may not have been "pure" series. A more recent genetic study showed that the incidence of affective illnesses in the parents and sibs of patients with involutional melancholia did not differ significantly from the corresponding figures for ordinary manic-depressive illness.

Diagnosis

In contrast to the milder forms, it is rare for the psychiatric nature of the illness to be missed. Rather, errors are made in missing an underlying organic disorder which, particularly in the elderly patient, may be one of the factors precipitating the illness. The other common error is to make a diagnosis of schizophrenia through not appreciating the wide and peculiar range of symptoms which may be present and yet quite understandable when a depressive mood is related to the patient's previous personality. In particular, it should be re-emphasised that *paranoid delusions are common in depressive illnesses.* The derogatory remarks, instead of being made by the patient himself, are made by a third person and imbued with a depressive quality.

TREATMENT

For a proper appreciation of management and treatment, the doctor must not only assess the ætiological factors in approximately their correct proportion, but also take into account which of these factors is treatable. Thus a patient, in whom the ætiological factors are assessed as reactive 30%, personality 60%, genetic 10%, may have personality and environmental problems which cannot be alleviated, yet physical treatment might result in sufficient improvement for her, with support to tackle her problems and make a reasonable adjustment to life once again.

On the other hand patients with a predominantly genetic or endogenous ætiology may respond well to physical treatments yet get repeated recurrences. Many such cases would recur less frequently if proper attention was paid to personality and environmental factors.

Treatment is directed on four lines:

(1) *General management.*

(2) *Removal of stressor factors.*

(3) *Assisting the patient to make more of his personality assets* and cover his defects; in other words, helping him to adjust better, by means of *psychotherapy.*

(4) *Physical treatment*, which may be aimed at specific treatment of a genetic factor, or simply at symptom relief until psychotherapy or environmental adjustments are under way.

General Management of a Depressed Patient

Given time, a spontaneous remission can be expected to occur and this natural tendency should be fostered as much as possible. Physical, environmental or psychogenic stresses which may have precipitated or be aggravating the illness should be tackled strenuously; similarly, problems arising as a result of the illness itself should be dealt with or anticipated if possible. Due to the patient's mental state, even minor tasks may assume enormous proportions. A housewife's indecisiveness may make decisions about shopping and cooking a burden or, on the other hand, her lassitude and mental apathy result in even the simplest household task being left undone.

Treatment should ensure quiet routine conditions without undue excitement and occupations should be arranged so that they are well within the patient's capacities. In moderate to severe depressions, these should be of a simple repetitive nature, such as peeling potatoes, washing-up, etc.; mental tasks, such as reading, are usually quite beyond the patient. If possible, he should be occupied in tasks allied to his normal occupation and, in milder cases, the patient should be encouraged to remain at work. He should be encouraged to undertake tasks which he is able to do, but not pushed to do things which are beyond his capacities, as failure will only increase his feelings of inadequacy and depression. Similarly it is not advisable to try to cheer up a depressed patient as the contrast between his state and other people's happiness makes him even more depressed and, in fact, such times as Christmas are often the most difficult periods for this type of case.

The really severe cases of agitation with risk of physical exhaustion or retardation of a degree leading to dehydration or inanition should be admitted to hospital where full nursing attention, adequate sedation and electroconvulsive therapy can be given. Lesser degrees of depression, however, can result in physical complications, particularly in the elderly. In these patients, even minor degrees of agitation and insomnia can lead quickly to a state of debility, such that the patient is susceptible to intercurrent infection. Particularly where the elderly patient lives alone, the depression may lead to nutritional deficiencies and possibly to a state of disorientation and confusion. Apart from attention to bowels, adequate intake of food and fluid, and general cleanliness, sedatives may be required to allay agitation which might otherwise lead to cardiovascular embarrassment. Chlordiazepoxide 10 mg. tds or amylobarbitone 45 mg. tds are in common use but promazine 50–100 mg. tds is often preferable in the elderly. Rather than giving regular sedatives to an elderly patient, it may be preferable to confine these to a set period of the day, say after lunch time, when the patient should be encouraged to rest. Insomnia is difficult to manage, particularly in those patients who wake early. It is as well to tell the patient at the beginning of treatment that he will not sleep normally until he gets really better but that he will be given tablets to ensure that he has an adequate amount of sleep. Short or longer acting hypnotics (e.g. sodium amylobarbitone 0·2 g. or sodium butobarbitone 0·5 g.) should be given as indicated in the individual patient. Needless to say, they should only be prescribed in small amounts or given in charge of a responsible relative. Alternatively, barbitone suppositories can be prescribed. These are effective yet comparatively safe, as it is not easy to introduce a lethal amount per rectum.

Suicide is a risk in all depressed patients and the doctor must assess this risk repeatedly to determine whether the patient is safe to remain alone in the house, should have someone with him all the time, or should be admitted to hospital. The risk of suicide depends not only on the degree of depression but also on the individual patient's previous personality. The most severe depressions are often so mentally retarded that they are incapable of making a suicidal attempt but may do so as they begin to recover and they regain their initiative. Similarly, suicide is more common in a patient who normally has a driving, determined personality compared with passive, rather apathetic, individuals. Lastly, the symptoms with which the patient presents also have a bearing on the degree of suicidal risk. Patients who feel they are doing other people harm and particularly those individuals who feel they are a burden on others are particularly prone to kill themselves in comparison to the hypochondriacal patient whose suffering, in his mind, does not affect other members of the family.

A patient will only commit suicide when he feels there is no other solution and, particularly, when there is no one to whom to turn for help. It is well known that suicides are much more common in single people, people who live by themselves, and in the elderly who, perhaps, have lost their spouse and are living alone, or feel a nuisance to their children. In these cases, admonitions to pull themselves together, etc., only serve to increase their feeling that nobody understands them and consequently their isolation. In such a state of desperation, a patient may try to draw attention to himself and one way of doing this is to make a trivial or half-hearted attempt at suicide. Frequently this is dismissed as a hysterical gesture, yet only too often it is the last cry for help from a patient in despair; if the plea goes unheeded he may feel that all hope is lost and the next attempt may be determined and successful.

The only way to assess the risk of suicide is to ask the patient tactfully and directly. It must be very rare for a depressed patient to be offended by such a question. On the other hand, if asked whether he becomes so depressed that he feels quite hopeless, would like to go to sleep and never wake up or even at times is tempted to take too many tablets, this will at once assure the patient that at last he is talking to somebody who understands how depressed one can feel. This knowledge at once decreases his feeling of isolation and of itself may give him the support he needs to avoid the necessity for suicide.

Suicidal thoughts may be of the most vague and transient nature, graduating to those where exact plans are laid. The patient may often be able to tell the doctor how bad a suicidal risk he is and whether these temptations are likely to get out of control and put into effect. Patients who have sudden waves of depression are, of course, much more difficult to assess and the patient will recognise that suicidal temptations during these sudden bouts of despair are much harder to resist.

The possibility of suicide should be discussed fully and frankly as a feature of this type of illness, a possibility from which the patient should be protected until he is cured. In this way the advisability of having a second opinion from a psychiatrist can be raised or even admission to hospital as an additional safety measure. There is no risk in a true depression of putting ideas into the patient's mind by discussing suicide. Even in milder cases of depression where suicide has not entered the patient's mind, he will appreciate the doctor's understanding how miserable patients like him can feel, and gratified that he is taking his case so seriously. In cases where there is even the slightest risk of suicide it is advisable that this should be discussed openly in front of the patient and a relative so that appropriate measures can be taken to protect him. The knowledge that he has been made safe from himself and that he has someone to turn to, even by telephone, will in itself be a great comfort.

Psychotherapy and Social Measures

In depressions of moderate to severe degree, psychotherapy should be limited to a supportive type. The patient is likely to feel lonely and isolated as if nobody understands his predicament properly and, at the same time, is frequently unable to have a normal feeling for other people. The patient may complain that not only has he lost his ability to feel affection for his wife or children, but he is equally unable to feel normal sorrow on hearing of someone's death. The patient will derive considerable support from the knowledge that the doctor understands exactly how he feels and from an explanation of his illness and symptoms, and also that other patients have similar illnesses and get better. From this position the doctor can then discuss the difficulties the patient has in his work or social relations arising from his illness. As the depression lessens, the doctor should direct his attention to any psychogenic factors which may have precipitated the illness. With the patient he should not only look at the precipitating stress but examine the patient's life history for similar episodes in the past. By this means the doctor should endeavour to give the patient an understanding into the sensitive spots in his personality and the stresses to which he is most vulnerable. Such an understanding in itself may afford a considerable degree of protection but, in addition, the patient may frequently be able to make adjustments in his life to avoid such stresses where possible.

Cumulative stresses, or the long-standing personality defects so frequently the basis of chronic depressive disorders, are usually not amenable to psychotherapy and have to be dealt with by attempting to adjust the environment. Thus, the burden of a housewife saddled with uncongenial surroundings or domestic disharmony may be considerably lightened by arranging for her to do a part-time job or, alternatively to go once or twice during the week to some social activity. Similarly, depressive reactions in the elderly, following a bereavement, are frequently related to loneliness and efforts should be made to re-socialise the patient. This is best done soon after a bereavement and before the patient becomes apathetic and resigned, when the inertia may be difficult to overcome. The social worker attached to the Local Authority may be invaluable and use should be made of clubs, social centres, day hospitals and Church activities.

Drug Therapy

Stimulants. Amphetamine and dexamphetamine are the stimulants in most common use. They are of little value in other than the mildest depressive illnesses. Their effect is transitory and may be followed by even deeper depression so that their value lies mainly in those disorders which are characterised by fatigue and lethargy confined to a particular part of the day, such as early morning. In addition to their action of reducing appetite, they tend to inhibit sleep if given later in the day and for this reason they are best given in a dose of 5–10 mg. first thing in the morning, perhaps followed by another 5 mg. at lunch time. The amphetamines may profitably be combined with sodium amylobarbitone, and spansules of this combination are on the market. Stimulants are best used for short periods, for instance to tide the patient over some minor crisis, as if given for longer periods there is a definite danger of addiction. In fact amphetamine is one of the commonest drugs of addiction. In addition to addiction, some patients also develop a schizophrenic-like psychosis with paranoid delusions and hallucinations. Similar complications have been found with phenmetrazine (Preludin), and pipradol (Meratran). Methyl phenidate (Ritalin) is a more recently introduced stimulant, although it is doubtful if it has any advantage over the older amphetamine derivatives.

Anti-depressant Drugs

Monoamine Oxidase Inhibitors. These were introduced as recently as six years ago and have proved a big advance in therapy. Unlike the stimulant drugs, they are non-addictive and are most effective in those depressed patients who can be treated at home either by their own doctor or as hospital outpatients. One can expect about 40% of this type of illness to improve with amineoxidase inhibitors. It is a matter of controversy whether the type of patient most likely to respond to these drugs can be differentiated clinically. There is a suggestion that amineoxidase inhibitors are more useful in those depressive illnesses which are either atypical or reactive in type, whereas the more typical endogenous illnesses are best treated with imipramine or its derivatives (see below). More specifically, it is suggested that patients whose illness has been precipitated by some severe stress, and whose symptoms are characterised by marked fatigue and episodes of anxiety, are most likely to benefit from this group of drugs.

With the amineoxidase inhibitors at present in use, improvement only starts after seven to fourteen days. If no benefit is apparent after a month, then some other treatment is indicated. The earlier the improvement, the better the final result and vice versa. There is also a correlation between the dosage required to give improvement and the therapeutic outcome. The smaller the effective dose, the better the result. Even when improvement occurs, it is by no means a cure but rather a relief of symptoms. For this reason the drug must be continued on a maintenance dosage until a natural remission occurs.

Iproniazid (Marsilid) on which most of the original work was done, has largely dropped out of use because of the incidence and severity of its side effects. These include fluid retention with œdema, hypotension, especially postural hypotension, hesitancy of micturition and impotence, all these being common and reversible. More serious are its hepatotoxic effects. Jaundice occurs in about one in 2,000 treated patients, but has a bad prognosis with a mortality of about 15%. Side effects are related partly to dosage but mainly to individual susceptibility, though older people do seem particularly susceptible. It is rather more effective than the newer amineoxidase inhibitors and for this reason is still used occasionally, when serial transaminase values should always be carried out to detect hepatotoxic effects at the earliest opportunity.

The newer inhibitors, phenelzine (Nardil), isocarboxazid (Marplan), nialamide (Niamid) and mebanazine (Actomol), like iproniazid, are hydrazine derivatives and their side effects are similar, though less common and less severe. In particular hepatotoxic effects are much less common. A recent addition to the amineoxidase inhibitors is tranylcypromine (Parnate). Unlike the other monoamine oxidase inhibitors, this is not a hydrazine and claims have been made for its relative freedom from the above side effects. However, it can result in a sudden and marked rise in blood pressure with an associated occipital headache, usually of a throbbing character. The headache subsides after three to twelve hours. Cardiac embarrassment may occur, with E.C.G. changes similar to those of cardiac ischæmia and occasionally a fall in blood pressure to hypotensive levels. The attack is thought to be due to a sudden release of adrenaline. In many cases the attacks seem to have been precipitated by a meal of cheese and it is probably wise to forbid cheese to patients taking tranylcypromine. Similar attacks occur with phenelzine and other drugs of this group but less frequently. *If a patient is receiving monoamine oxidase inhibitors, amphetamines and particularly intravenous methamphetamine should only be used with great caution and morphia and its derivatives are contraindicated.* Amphetamine, by releasing adrenaline, tend to precipitate the phæochromocytoma-like attacks of hypertension and headache mentioned above. A proportion of patients given morphia or its derivatives such as pethidine have a severe reaction, becoming collapsed, comatose and with suppressed respiration and several deaths have been reported.

In the treatment of an individual patient it is usual to start with doses of isocarboxazid of 10 mg. three times daily or the equivalent of one of the other drugs. The patient should be watched for the occurrence of side effects, and the dose increased if these are absent and improvement does not occur after a fortnight. It is wise before commencing treatment to warn the patient that improvement cannot be expected until at least the second week of treatment, as otherwise he might be disappointed. However, if no improvement is noted after four weeks' therapy it is useless to continue. Patients who are unresponsive to one monoamine oxidase inhibitor seldom respond more than partially to another and if one of these drugs fails to benefit the patient, some quite different drug or method of treatment should be considered. If improvement results, the dose should be reduced to a level sufficient to maintain the mental state and only after two or three months should a very cautious attempt be made to withdraw the drug completely, increasing the dose again if symptoms recur.

Although the monoamine oxidase inhibitors are now established as a useful aid in the treatment of depression, it is still not proven that they owe their therapeutic properties to their action on monoamine oxidase. The evidence in favour of this has been summarised as follows. Firstly, there is a rough correlation between the pharmacological action on monoamine oxidase and the clinical effectiveness of the drug. Secondly, with the small doses used in man, there is only a slow development of monoamine oxidase inhibition and this is associated with a similarly delayed clinical effect. Thirdly, when the drug is stopped, monoamine oxidase activity only returns slowly and again, clinical relapse is delayed.

Imipramine Group of Drugs. The other group of antidepressant drugs is that of imipramine (Tofranil) and its derivatives. Imipramine has a chemical structure very like chlorpromazine and in fact it was first tested as a tranquilliser before it was found to have antidepressant properties. Little is known about its possible mode of action. There is a suggestion that the more typical retarded endogenous types of depression respond better to imipramine than to the monoamine oxidase inhibitors, whereas the latter are preferred in the more atypical and agitated states. This is by no means certain at present and is still a matter of investigation. However, it is certain that the side effects of imipramine are often poorly tolerated in anxious, tense patients and the drug often has to be stopped because of this.

The overall incidence of improvement is probably similar to that with the monoamine oxidase inhibitors and in outpatients is probably about 40%, though the incidence would be lower for the more severe inpatients. It is usual to build up the dose gradually over a period of a week to about 150–300 mg./day. Symptom relief occurs within the first three weeks but, as with the monoamine oxidase inhibitors, the drug should be continued on a maintenance dose for several months until a natural remission occurs. In some chronic depressions, treatment may have to be continued indefinitely.

Side effects are very common and are a big drawback to the usefulness of the drug as, although not usually serious, they are disturbing to an already distressed patient who not uncommonly is unable to tolerate them. They are particularly common if imipramine is given after a course of a monoamine oxidase inhibitor. In such cases it is wise to allow an interval of 4–7 days between the two drugs. As mentioned above, this is particularly so with the already anxious and tense patient, because of the nature of the side effects. Atropine-like side effects are common at the beginning of treatment but tend to disappear as it continues. In descending order of frequency they comprise dryness of the mouth, tachycardia and disturbances of accommodation. Sweating may also occur. A fine tremor is sometimes present though more frequently the patient complains of an inner restlessness. More uncommonly, giddiness and postural hypotension may occur, especially in elderly patients who occasionally may also develop confusional and hallucinatory episodes at night.

Less in the nature of a side effect is the tendency to produce a state of hypomania, which may also occur with the monoamine oxidase inhibitors. It is due to an overdosage of the antidepressant drug and is particularly likely to occur in those manic-depressive illnesses where the patient was previous subject to mood swings.

Amitriptyline (Tryptizol) is very similar to imipramine in its actions; it is claimed to have fewer side effects but drowsiness is not uncommon. Chlorprothixene (Taractan) is said to combine the properties of chlorpromazine and imipramine, which, as has been mentioned, are not dissimilar chemically. Its usefulness is still uncertain. Recent evidence suggests that the antidepressant properties of imipramine and amitriptyline are exerted by their desmethylated derivatives. These compounds, desipramine (Pertofran) and nortriptyline (Aventyl) do not, at this stage, appear significantly superior to imipramine and amitriptyline.

Electroconvulsive Therapy (E.C.T.)

E.C.T. is a completely empirical form of treatment. How it benefits depression is quite unknown. It is clear, however, that it is the production of the major, grand mal, fit which matters, and that refinements such as modifying the electrical wave form, pulse strength, etc., carry no benefit whatsoever. Equally good results may be obtained by inducing the fit chemically with a drug such as leptazol. However, chemically induced fits are most unpleasant for the patient, and for this reason and the ease and certainty of obtaining a fit electrically, E.C.T. is now universally used.

The indication for E.C.T. is depression of a mainly endogenous type. In suitable cases, E.C.T. results in a complete cure of the illness though, of course, not preventing a recurrence. It is particularly effective in those agitated depressions arising for the first time in the involutional period—the so-called involutional melancholias—and can be very effective in those depressive illnesses occurring in late age. In the latter group, however, care should be taken, as confusional episodes may be prolonged in those patients with a mild dementia or marked arteriosclerotic changes.

E.C.T. is extremely safe when given by an experienced team and the mortality should be little more than that of giving the anæsthetic. With advances in anæsthesia and muscle relaxants, age should be no bar and some of the most gratifying results occur in the elderly. The only complete contraindications to E.C.T. are a recent cardiac infarction and secondly, the puerperium, because of the risk of embolism. Other contraindications are relative. For instance, in a case of pulmonary tuberculosis, one should weigh the disadvantages of an anæsthetic and modified convulsion, against the continued restlessness and agitation of the depressive illness. Similar factors should be considered in cases of heart failure, postoperative illnesses and the states of physical debility seen in the elderly.

The technique of giving E.C.T. is fully described in textbooks of physical treatments (e.g. Sargant and Slater). The patient should not have eaten or drunk anything for six hours and dentures should be removed. An injection of atropine, 0·6 mg. is given either half an hour before treatment, or intravenously at the time of the anæsthetic. More important than its action of drying bronchial secretions, is its effect on decreasing the incidence of cardiac irregularities produced by E.C.T. An intravenous anæsthetic, such as thiopentone, is given, followed by a muscle relaxant. A rubber gag is placed between the teeth as protection during the fit, which is then produced by passing small electric currents through a head band fitted with gauze-covered electrodes which are adjusted to lie on the patient's temples. With proper relaxation there is only a mild tonic contraction, followed by generalised clonus. Following the immediate resuscitation, the patient is encouraged to sleep for at least an hour, so that when he awakes, the worst of the confusional period will have passed. He may then have a light meal but as he will be slightly confused, to a lessening degree, for the remainder of the day, he should remain quiet and have an early night. The following day he will be able to go about his duties—including going to work—as before his treatment.

E.C.T. is usually given twice weekly initially, but this may be decreased to once weekly toward the end of treatment. In favourable cases, improvement begins after the third or fourth convulsion, when six or seven treatments may suffice. If improvement is not apparent after six or seven convulsions, it is rarely advisable to continue.

Complications are mainly those of giving the anæsthetic and, in fact, when a fatality does occur, it is usually in the recovery room and due to bronchial obstruction or inhalation of vomitus. Ventricular fibrillation is a rare complication which is largely prevented by giving atropine before treatment. A partial amnesia as a result of treatment is common, especially in elderly patients. The amnesia increases with the frequency and number of convulsions and in the elderly can be reduced by decreasing the treatment to once weekly as soon as the clinical condition permits. The amnesia is practically always temporary but in elderly patients may last for several months. It is rarely serious in degree, but rather an inconvenience, particularly for a patient who relies upon his memory in his job.

E.C.T. compared with the Antidepressant Drugs. In practice the antidepressant drugs must stand comparison with E.C.T. and the clinician must weigh the advantages and disadvantages of each when considering the most suitable treatment for an individual patient. There is no doubt at all that in properly selected patients E.C.T. is a most safe and effective method of treatment and in such patients it produces a "cure". On the other hand, E.C.T. entails the unpleasantness of an anæsthetic and a period of confusion immediately following the treatment, which at the very least entails a day off work at each treatment session. On the other hand relief from depression with the antidepressant drugs may not be complete and treatment must be continued, perhaps for many months, until a natural remission occurs. In practice, the antidepressant drugs are of most use in the mild to moderately depressed patient who is suitable for treatment at home or in the outpatient's department. It is in these relatively mild cases that the antidepressant drugs are most effective, and E.C.T. can usually be held back for those patients who prove intractable to a trial of both monoamine oxidase inhibitors and imipramine. In the more severely depressed patients there is no doubt that the antidepressant drugs are less effective and, particularly in cases where the depression and agitation are causing physical distress because of difficulties in eating or from the exhaustion through insomnia or general agitation and restlessness, most psychiatrists would prefer to start treatment with E.C.T. rather than wait for a trial of the antidepressants. This again holds for patients with suicidal feelings as there is no doubt that E.C.T. is much more likely to benefit such severely depressed patients and such a risk to life should not be prolonged by a trial of a less effective treatment.

Recently the possible benefits of combining antidepressant therapy with E.C.T. have been investigated. There is little evidence to suggest that antidepressants reduce the number of E.C.T.'s required in any individual course of treatment. However, studies of large series of patients do suggest that the relapse rate following E.C.T. is reduced if the patients are continued on a maintenance dose of one of the antidepressant drugs. It may well be that whereas E.C.T. by itself is adequate for the more typical endogenous illnesses, atypical illnesses, those with large reactive factors or illnesses in patients with an obviously defective personality, may best be treated with a combination of E.C.T. and antidepressants. Put another way, it is recognised that some patients are more predisposed to relapse after E.C.T. and these should be given antidepressants in addition.

Prefrontal Leucotomy (see page 66)

Some long-standing cases of depression associated with pronounced agitation obtain dramatic relief from prefrontal leucotomy. This is particularly so in patients with so-called involutional melancholia who fail to respond to E.C.T. and antidepressant drugs, though as a rule it is wise to wait until the illness has lasted for two years as 95% cases remit spontaneously within this period.

HYPOMANIA AND MANIA

It is sometimes hard to know when a patient is in a normal optimistic frame of mind and when his elation of mood has become abnormal. Yet this is a decision which the general practitioner may have to make on his own, because of the patient's lack of insight and unwillingness to consult a psychiatrist. The decision is best made by a knowledge of the patient's previous personality. The patient is optimistic, confident and with boundless energy with which to carry out perhaps overambitious plans. His mind appears unusually clear and he becomes assertive in a manner so confident that it often carries conviction. Depending on his normal disposition, he may become excessively familiar, over-generous with his money, or indulge in gambling, drinking, or sexual excesses, perhaps with serious consequences. Side by side with this euphoria, there is usually a degree of truculence and irritability, especially when crossed or called to account for his conduct. There is a lack of tact and a tendency to quarrel which may involve him in fights or, more seriously, in the loss of his job.

The patient has a complete lack of insight into his condition and will insist that he has never felt better in his life. Yet, if permitted, the patient may ruin himself and his family, either by the injudicious nature of his plans or his inability to carry them out because of an exacerbation of his illness or a descent into depression.

In more advanced cases, there is a well marked excitability of mind and movement. There is a general over-activity which at times may be incessant, and as sleep is often only brief, exhaustion may occur in serious cases. Thinking appears to be rapid and the talk flits from topic to topic connected only by similarities of sound or loose association. In fact, there is a paucity of ideas and the range of talk is limited; it seems to go round and round, the same topics reappearing over again.

The mood is predominantly one of elation and euphoria, but the lability of affect is even more typical and transient depression and tearfulness can usually be brought on quite easily, to pass into laughter just as quickly. Other aspects of mood are also affected and hypomanic patients are easily roused to anger when frustrated. The patient's euphoria is expressed in his confidence and ideas of his strength and prospects. He may believe he has a special mission in life, but consistent delusional ideas are uncommon, as are hallucinations. In the more severe cases of mania, talk may become incoherent, movement fragmentary, and the picture resemble that of delirium.

Diagnosis is usually easy, the whole picture being explicable in terms of an elation of mood.

Treatment of Hypomania and Mania

In the milder forms it may be difficult to persuade the patient to accept treatment and the patience and tact of the relatives and doctor may be tested to the extreme. Measures should be taken to protect the patient from his extravagances, either financial or of behaviour. In the mildest cases, leave of absence from work or a quiet holiday, combined with sedatives, may suffice, but in most cases hospitalisation will be required, and compulsory admission may be necessary if all attempts at persuasion fail. The environment should be kept routine and quiet to decrease excitatory stimuli, though some activity and occupation is necessary to reduce inner pressures.

Specific treatment has gained considerably from the introduction of the phenothiazines, and the major tranquillisers in general (Chap. 8 and Appendix 4). Drugs such as chlorpromazine, or haloperidol should be given in an increasing dosage sufficient to control symptoms, which may vary from 2–300 mg. to over a gram of chlorpromazine a day. With large doses of these drugs it is wise to prescribe an anti-parkinsonian agent in addition.

Most cases, especially the milder ones, respond to the major tranquillisers but some patients are particularly resistant and these, paradoxically, may respond well to E.C.T., usually given at rather more frequent intervals than in cases of depression, e.g. alternate days. In any event, follow-up should be regular and withdrawal of drugs undertaken only gradually as relapse may accompany too early a return to the stimulation of a full life and a swing into a depressive phase is not infrequent.

Course and Prognosis of Affective Illnesses

The course of the untreated illness and subsequent prognosis for repeated attacks is extremely difficult to assess in any individual case. In general, however, the more typical the illness, the better the prognosis for complete recovery which, in a depressive illness, will take on average about six months. Increasing age, severe hypochondriasis, depersonalisation and atypical features all point to a more prolonged illness. However, in all cases there is a tendency to spontaneous remission though in involutional cases this may take as long as two years to occur. In a small percentage of elderly patients, the illness does not remit. Manic attacks tend to be shorter than depressive ones—one to two months is a usual duration—though a manic attack occurring for the first time over forty years is likely to be prolonged.

As the patient is predisposed to affective illness, recurrent attacks are usual but by no means the rule. Probably about

20% of patients have only one attack during their life, 80% have a second and 60% have a third attack. A depressive illness precipitated by a severe physical or psychogenic stress may well be the only illness in a patient's life, but a first attack of mania is rarely the last and is followed by further attacks which may be of a manic or depressive type, though the attacks tend to be consistently depressive in type with increasing age. Just as manic and depressive illnesses may occur at different periods of a patient's life, so there may be an admixture of symptoms in the course of one illness. This is particularly so in manic disorders, which are frequently ushered in by a depressive phase and may also terminate by a descent into melancholy.

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Chapter 8

SCHIZOPHRENIA

Definition

There are probably many illnesses under this name and some authorities speak of them as the "group of schizophrenias". Common to them all is a detachment from the outside world and a fragmentation of the normal psychological connections within the mind—a multiple splitting of the personality.

Incidence

Schizophrenia probably occurs in all parts of the world. In large cities it is most common in the densely populated centres where poverty, crime, unemployment and social disorganisation prevails. The incidence of schizophrenia in the general population is just less than 1%, there being little difference between the sexes. 75% of cases have their onset between 15 and 25 years of age and there is another increase in incidence at the menopause.

ÆTIOLOGY

Heredity

It is generally accepted that hereditary factors play a predominant role in the causation of schizophrenic psychoses. Although criticisms can be made about many of the investigations, the evidence in favour of genetic factors is overwhelming. Twin studies demonstrate that uni-ovular twins have a concordance rate of about 80% compared with a rate of about 15% for binovular twins, a rate which is not dissimilar to that of ordinary siblings. Family studies show that the expectancy rate for schizophrenia is much higher among the relatives of schizophrenics. (Table VII.) However, the mode of inheritance is still a matter of controversy. Almost certainly a

TABLE VII. Expectancy Rates of Schizophrenia in Relatives of a Proband as reported by Different Observers

(After Altschuler.)

	Per Cent
General Population	0·85
Half siblings	7–8
Full siblings (with most investigators agreeing that the incidence is over 10%)	5–15
Parents	5–10
Children (of one index case)	8–16
Children (of two index cases)	53–86

recessive mechanism can be ruled out as there is no significant difference in the expectancy rates of parents, siblings and children, and although an increased rate of consanguinity in the parents of schizophrenics has been reported, this was not significant and has not been confirmed. The fact that the expectancy rates are similar in parents, siblings, and children suggests that the transmission is by a dominant gene with partial penetrance (0·25). The illness would usually become manifest in the homozygous state but only occasionally if heterozygous. It is a predisposition to schizophrenia which is inherited and other factors—personality, environmental, or physical—are necessary for the illness to become manifest.

This does not mean that all cases of schizophrenia are caused by the same abnormal gene although apart from some atypical cases clinicians have been unable to define genetically specific subgroups. The old clinical groupings of hebephrenic, catatonic and paranoid types are not genetically distinct.

Biochemistry

Progress in research depends to a great extent on the formulation of hypotheses which can be tested experimentally. Such hypotheses of a biochemical ætiology of schizophrenia have led to the present position where positive findings are beginning to emerge suggesting the type of biochemical abnormality which is likely to be involved. Two of the most productive hypotheses derived from the hallucinogenic drugs lysergic acid diethylamide (LSD) and mescaline.

Pharmacologically, LSD is a powerful antagonist of 5-hydroxytryptamine (5HT) when tested on smooth muscle. Since 5HT is important for normal brain functioning, it was suggested that one of its properties might be to keep a person sane, and that LSD produced hallucinations and a psychotic-like state by antagonising 5HT in the brain. In fact, it is most unlikely that this is true, nor indeed has an antagonism been shown between LSD and 5HT in the brain.

Mescaline is chemically similar to adrenaline, and it has been suggested that an abnormality of adrenaline metabolism may result in the production of a mescaline-like substance which would be particularly likely to be formed under stress when the concentrations of adrenaline would be increased. In fact adrenochrome, which can be formed in vitro by oxidation of adrenaline, is said to be hallucinogenic. Attractive as this theory is, no evidence has been found to support it. There is certainly no evidence that adrenochrome is formed in schizophrenics, and all the evidence points to the metabolism of adrenaline being normal.

At the time of writing, two lines of work seem promising. First is the hypothesis that a *disorder of methylation* is in some way causally connected with the schizophrenic illnesses. Pharmacologically, it has been shown that the methylation of 5HT and derivatives of tryptamine and of adrenaline can produce powerful hallucinogenic substances. An enzyme capable of performing some of these reactions has been isolated in mammals. Furthermore, feeding schizophrenics with methyl donors (chemicals which act as donors of methyl groups in the methylation process) produces in many cases an exacerbation of their symptoms.

The second series of investigations which hold promise are those attempting to demonstrate the presence of a *toxic substance* in the blood or body fluids of schizophrenics. The results of these investigations are controversial and the most that can be said is that many workers in various countries have claimed to find differences when body fluids or extracts from schizophrenics are administered to spiders, fish, mice, etc. If indeed such a toxic substance can be confirmed, isolation and identification will be only a matter of time.

Much time and effort have been wasted by assuming that some characteristic abnormality will be uniformly present in all schizophrenic patients. The probable genetic heterogeneity of the condition makes it quite likely that different biochemical abnormalities will be found in different genetically specific types of the disorders. Workers should now be thinking in terms of biochemical genetics and if an abnormality is found, searching the patient's relatives for a similar defect, rather than expecting a similar abnormality to be present in all schizophrenics.

Physical Factors

The fact that schizophrenia is rare before puberty and has a secondary peak of incidence at the climacteric suggests that endocrines play an ætiological role. However, in spite of intensive investigation no significant abnormalities have been found. In the rare periodic catatonia, Gjessing found changes in the total nitrogen balance which showed an exact correlation with the changes in the mental state. However, metabolic studies in other forms of schizophrenia have not demonstrated any characteristic findings. The electroencephalogram, on the other hand, does show an increased incidence of abnormal records compared to the general population. The earlier the onset of the illness and the longer its duration, the more likely is the E.E.G. to be abnormal. However, the records do not show a characteristic pattern, and may show a diminution of alpha (10–13 c/sec), epileptic discharges, or maturation defects. There is a schizophrenic-like psychosis associated with epilepsy, but this is probably distinct from true schizophrenia.

Psychological

Epidemiologically, it has been found that schizophrenia is commonest in those areas of a large city where there is most social isolation. This can be partly explained by a tendency for deteriorated schizophrenics to drift to these usually impoverished areas, but it is probable that social isolation itself plays a part in precipitating a schizophrenic illness in a predisposed subject. Whether or not such a predisposition shows itself in the personality is a matter of controversy. A *schizoid personality* describes a quiet, shut-in person who shows little emotion, is usually unsociable and who indulges in excessive private fantasy. Many such people never develop schizophrenia and certainly over half the patients who manifest schizophrenia seem to have had a relatively normal premorbid personality. A similar state of affairs holds for *body build*. It is doubtful if the asthenic somatotype is much commoner in schizophrenia than in the general population. However, a true pyknic somatotype is uncommon in schizophrenia. For practical purposes it is best to assess the personality as for all psychiatric disorders, the greater the personality defects the more susceptible the patient to stress. Thus a so-called schizoid personality will be more likely to psychiatric breakdown and have a worse prognosis than someone with a more robust personality.

SYMPTOMATOLOGY

A full description of the symptoms of schizophrenia is, to my mind, inappropriate in a book of this sort. The general physician would boggle at the wealth and complexity of the symptomatology and might well miss the essence in the mass of detail. For practical purposes a brief description is adequate.

Schizophrenia is a true illness and in the majority of cases the onset is fairly rapid over a few days or two or three weeks. Occasionally the onset is insidious, arising out of a schizoid type of personality, but even in these cases there is evidence of a definite change in the patient, even though one might have to compare his present state with that of a year or even two years ago.

It will be helpful if from the start one looks at schizophrenic patients from two aspects. First, what are the positive symptoms of the illness and secondly, what damage has the schizophrenic process done to the underlying personality. In the first group belong hallucinations, delusions, and catatonic symptoms and these are usually the symptoms which bring the patient to the doctor and which are, on the whole, susceptible to modern methods of treatment. Damage to the personality, however, is usually permanent and the course of the illness in these cases is unfavourable. Thought disorder and blunting or incongruity of affect, are signs of such personality damage.

Thought Disorder

This may show itself simply as a poverty of associations and ideas or the patient may tend to misunderstand a question or talk on and on without getting to the point. There may be nothing striking on which to put one's finger, and at first the doctor may think there is nothing wrong and that it is he himself who is woolly and vague. In more advanced cases there is evidence of a definite disorder of associations, nicely described as the "knight's move in thought". This may show itself as a lapse in a normal process of thought or be so extreme as to make the patient incoherent—a state which has been called "schizaphasia". The patient will fasten on chance associations which, though correct in themselves, divert him from his previous train of thought. Words may be used out of context, meanings and relationships interchanged, several words condensed into one, or new words invented to express thoughts. Uncommonly, the patient has a sudden block in his thinking process, termed "thought block" or "thought deprivation". None of these symptoms may be apparent while taking the case history and may only become evident when the patient is allowed to express himself freely; for instance, if asked to explain the meaning of a proverb.

Disorders of Emotional Response

Emotional blunting and shallowness is by far the commonest disorder of affect, and early in his illness the patient may state that he no longer has his normal feeling for his family. Later he may appear unmoved by some tragic event or even laugh at the death of a near relative. Such emotional incongruity is difficult to understand and it may be that the words carried some different meaning for him or triggered off some private series of associations. That the emotions are disordered rather than lost is shown also by the occasional occurrence of the strongest passions, such as ecstasy, terror and despair.

Disorders of affect are always associated with a lessening of contact with reality. At first this may show itself in a lack of reserve and normal reticence, later the patient loses interest, becomes apathetic and more and more wrapped up in his own world so that his behaviour may become autistic. In this state emotional outbursts of anxiety, rage, etc., may occur for no apparent reason.

Delusions may occur to patients suddenly and with a conviction that puts them beyond all argument or, more commonly, they develop gradually out of vague ideas of reference. The patient gets a feeling that there is a meaning behind everyday happenings. At first he is perplexed but then he begins to "see through it", true paranoid delusions develop and these are often associated with hallucinations. These delusions are usually of a persecutory nature. Things are happening or being done to him which are grossly unfair. In the early stages, before apathy sets in, the patient may act on his delusions, going to the police, attempting suicide or even attacking some innocent bystander. The other feature of paranoid delusions is that they tend to have a grandiose character. Thus the patient may think that the Communists or the Government are behind it all, or state that the hospital nurses, doctors and other patients are all frauds and have been put there to trap and spy on him. The delusions may have a religious flavour, when he feels that he is the new Messiah and that his mission is being blocked by the Jews or Jesuits. Erotic and hypochondriacal forms are not infrequent.

Much of the colouring of the delusions can be explained by the patient's experiences and cultural background; a patient who feels that his thoughts are being controlled may explain this in terms of hypnosis or radar. The degree of systematisation and elaboration of the delusions depends on the degree of thought disorder and personality damage. The more intact the personality, the more the delusions are kept within bounds. Furthermore, the patient is often able to keep his delusions encapsulated and retain his usual outside contacts. As the personality deteriorates, the delusions become more and more bizarre, less and less systematised, and spread to involve all aspects of his life and thought. Thus a man who believed he had been entrusted by God with a special mission may deteriorate to a state when he feels he is both the Virgin Mary and chief of the C.I.D., the next moment complains that he is the rightful Queen of England and later that he is Napoleon, as proved by the fact that his wife is called Josephine.

Hallucinations of any of the senses may be found, but auditory hallucinations are the most frequent. Usually the voices talk about the patient, referring to him in the third person, and they may be derogatory and abusive, encouraging, or simply commenting on his actions, e.g. "he is getting up", "he is going to the door", etc. Alternatively the voices may speak to the patient or they may give orders which he feels compelled to carry out to the letter. Characteristic of schizophrenia is the feeling that voices repeat the patient's thoughts, either just before, while he is in the process of thinking them, or immediately afterwards. Usually the voices are heard as coming from outside, just as any other sounds, but occasionally they appear to come from inside the patient's head or, more rarely, from some other part of his body.

True visual hallucinations are uncommon in schizophrenia, but hallucinations of taste, smell and touch are not infrequent and may be woven into the patient's delusions.

Catatonic Symptoms

The actions and bearing of the patient are often characteristic and an awkwardness and lack of grace in movement may often be seen early in the illness and are evidence of mild catatonia.

Many catatonic symptoms are opposites. Thus, there may be stupor, akinesis or excitement, mutism or verbigeration, negativism, or automatic obedience when the patient may retain a posture imposed by the doctor. Posturing, repetitive movements, mannerisms or other types of stereotyped behaviour are common and frequently have a symbolic meaning for the patient.

CLINICAL FORMS OF SCHIZOPHRENIA

The terms hebephrenia, catatonia, and paranoid (dementia paranoides) were coined before Kraepelin and Bleuler had developed the concept of schizophrenia and they are of little practical use except as descriptive terms. Thus *hebephrenic* describes a type of illness which tends to have an early onset, a chronic course, and which is characterised by marked personality deterioration with thought disorder, emotional blunting, etc. The *catatonic* form frequently has an explosive onset; catatonic features are predominant but usually yield to treatment. The *paranoid* type in which delusions and hallucinations predominate, tends to develop later in life and to have a more insidious onset. The personality is well preserved in the early stages but later may suffer deterioration. *Paraphrenia* is the name given to a paranoid type of schizophrenia where delusions are more systematised than usual and the personality remains relatively intact.

COURSE AND PROGNOSIS

Schizophrenia is a very grave illness with a tendency to increasing and permanent damage to the mind. However, the outlook is far from hopeless. About a third of patients with a first illness remit, and patients who remain well for three years are likely to remain well for at least another seven. However, if no remission occurs within two years the chances of cure are remote. Similarly, relapses are attended with a worse prognosis, and recovery after a third attack is improbable.

Prognosis in the individual case is difficult, but good prognostic factors are:

(1) An abrupt onset of the illness.
(2) A marked precipitating factor.
(3) A well-adapted, non-schizoid, personality.
(4) Preservation of the underlying personality.

On the other hand, an insidious onset of a hebephrenic type of illness with thought disorder, emotional flattening and other evidence of damage to the personality, particularly if it was previously of a schizoid type, all point to an unremitting, downhill course.

TREATMENT

General

There is no doubt that the regime of a good psychiatric hospital has marked therapeutic powers. Occupational therapy, social activities, industrial units, and the constant endeavours of the individual nurses are aimed at resocialising the patient, developing his outside interests and contacts, and trying to prevent his withdrawal and preoccupation with morbid thoughts, hallucinations, etc. Psychoanalysis and "insight" psychotherapy are, with rare exceptions, contra-indicated. However, psychotherapy aimed at understanding the patient's present difficulties, with a view to discussing them and helping him with them on a friendly basis, can often be very beneficial. This benefit is probably due to the relationship he develops with his doctor who helps him to get his feet on the ground and face his difficulties, but at the same time offers help and friendship which again counters a tendency to introversion. It is surprising the relationship one can develop with even an advanced schizophrenic patient, and controlled trials have convincingly demonstrated the benefit to patients of this simple method when compared with a more formal type of psychotherapy.

The introduction of the major tranquillisers has been a great advance in therapy but, at the same time, has increased the responsibilities of the family doctor. Many patients may now be treated as outpatients, and even if admitted to a mental hospital may be discharged early to continue their treatment at home. The problems of reintegrating into the community a patient who has been in a mental hospital for a long time are very great. The policy of treating the patient at home is aimed at overcoming this and keeping the patient among his family, friends and home surroundings in an attempt to maintain his interests and contacts. The newer drugs make the patient available to psychotherapy and enable general rehabilitation to be carried out earlier and more efficiently. Improvement is less marked if tranquillisers are given without at the same time introducing social measures.

Drugs

All newly diagnosed cases of schizophrenia should be given the benefit of an adequate trial of one of the major tranquillisers. Response to the drugs can usually be expected within a fortnight but some cases may only improve after four to six weeks. This improvement is more in the nature of symptom relief than a true cure and the drug must be continued for at least six months before cautiously and gradually tailing off. In more severe or long-standing cases the drug may have to be continued for much longer and in some patients indefinitely. Frequently a patient will stop the drug when he is feeling well, because of some side effect of the drug or because of some intercurrent infection. Relapse is not immediate and may only occur several weeks or even months after stopping the drug, and this may lead to a dangerous complacency in the patient's relatives or even the doctor. It cannot be emphasised too strongly that the major tranquillisers, when used for schizophrenia, must not be omitted without informing the psychiatrist who should be advising on treatment, and preferably only after consultation with him. It is distressing to see patients relapse simply because they did not take their tablets. *Such a recurrence is often most difficult to treat and may result in further permanent damage to the personality* which itself predisposes to further relapse.

Because the family doctor is likely to have several schizophrenics under his care, he must be well acquainted with the major tranquillisers and their side effects.

Phenothiazines. Chlorpromazine was introduced into psychiatry in 1953 and since then it has stood the test of time and extensive trials in all parts of the world. It is now established as the standard for comparing the efficacy of newer drugs of this type. All investigators agree that it is most effective in psychotic patients who are excited, disturbed or who have productive symptoms as delusions or hallucinations.

The dosage used varies from 150 mg. to over 1,000 mg. daily and although improvement usually occurs in the first week, it is best to persist with the drug for at least six weeks before assuming it is ineffective. When improvement is obtained, dosage may be reduced to a maintenance dose which should be continued for at least six months and, in the chronic schizophrenic, indefinitely. Relapse may only occur several months after the drug is reduced or stopped and patients should therefore be followed up carefully for a prolonged period. Toxic effects are common but as a rule are not serious. Parkinsonism occurs in about 8% of patients and is twice as common in women as in men. Less commonly and in decreasing order of frequency, there may be skin rashes, cardiovascular effects (mainly hypotension and œdema), jaundice, convulsions and, in about 0·3% of patients, blood dyscrasias. None of these toxic effects is entirely related to dosage, individual sensitivity and perhaps hypersensitivity being factors. This is particularly so for jaundice and skin rashes, which almost always occur in the first few weeks of treatment. The jaundice is of an obstructive type and usually clears readily when the drug is withdrawn. More serious disturbances are probably on a background of previous hepatic damage.

New Phenothiazines. In order to understand the relations of these newer drugs, one to each other, it is helpful to know something of the chemical structure. The phenothiazine nucleus is made up of two benzene rings joined together by an atom of sulphur and nitrogen. Practically all the major tranquillisers have a chain of three carbon atoms stemming from the nitrogen. This seems to be important as compounds with less than three carbons in the chain appear to be less effective clinically. By altering the substituent radical at various positions the potency of the drug can be increased. The addition of a piperazine ring to the 3 carbon side chain greatly increases the potency, as does the presence of a halogen at position (2) of the ring (Fig. 5). However, the fact that a drug is more potent on a mg. basis does not necessarily mean that it is more useful clinically. Drugs with a relatively low mg. potency have properties which are not dissimilar to those of chlorpromazine. They tend to have a sedating effect and are particularly useful for agitated states, especially in the elderly (Chapter 9). Such drugs are promazine (Sparine), trifluopromazine (Vespral), methotrimeprazine (Veractil) and thioridazine (Melleril) (Appendix 4).

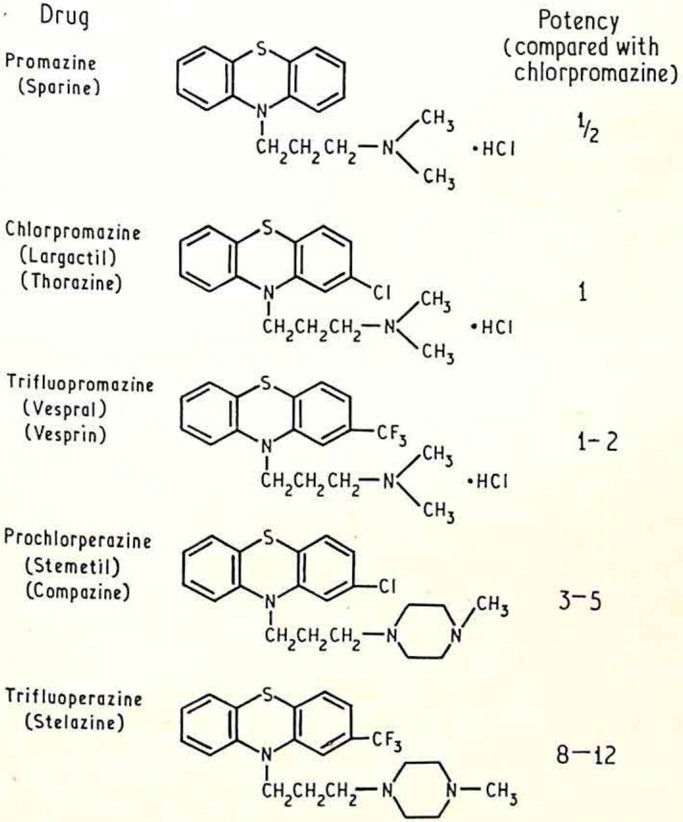
Drug
Potency (compared with chlorpromazine)
Promazine (Sparine)
S
N
CH2CH2CH2—N
CH3
CH3
•HCl
1/2
Chlorpromazine (Largactil) (Thorazine)
Cl
1
Trifluopromazine (Vespral) (Vesprin)
CF3
1-2
Prochlorperazine (Stemetil) (Compazine)
3-5
Trifluoperazine (Stelazine)
N—CH3
8-12

FIG. 5. Illustrating the effect of changes in the substituent radicals on the clinical potency of phenothiazine compounds.

Those drugs with a piperazine side chain are more potent on a mg. basis. Whereas chlorpromazine has little or no effect on the "negative" symptoms in schizophrenia, an important feature of these drugs is their beneficial effect on the apathetic schizophrenic. In fact, it is generally agreed that the piperazine group of drugs is superior for the treatment of schizophrenia, and that every newly diagnosed case should be given the benefit of one of these drugs for at least a prolonged trial period. Such drugs in common use are: Prochlorperazine (Stemetil), trifluoperazine (Stelazine), thiopropazate (Dartalan) and perphenazine (Fentazine) (Appendix 4).

The initial starting dose is of the order of 5 mg. trifluoperazine twice or three times daily or its equivalent in other drugs. In unco-operative patients or if a rapid effect is required, the drug may be given intramuscularly in doses of 1 mg. three times a day of trifluoperazine or its equivalent. An effect is usually apparent within the first week, though in the more chronic patient the drug should be given for 6–8 weeks before failure is accepted. A watch should be kept for the occurrence of extrapyramidal side effects, which are easily confused with the apathy and generally decreased movements of some schizophrenics. However, to the trained observer, the rigidity, tremor and typical gait are unmistakable. If these symptoms do occur, an antiparkinsonian agent such as orphenadrine (Disipal) 50 mg. tds should be added to the prescription. Such an agent may usefully be prescribed as a precautionary measure when higher doses of the phenothiazines are used.

When the desired effect is obtained the drug is carefully reduced to a maintenance dosage and often the patient can be discharged home at this stage. However, it is essential that the drug is continued for at least six months and usually for much longer. When the drug has been reduced and especially when it has been stopped, the patient should be followed up carefully and watch made for any evidence of relapse. In many chronic schizophrenics the drug may have to be continued indefinitely.

Extrapyramidal Effects. The newer drugs have an advantage over chlorpromazine as they have less tendency to cause jaundice. However, there is an increase in the incidence of extrapyramidal side effects as the mg. potency of the drug increases and these effects are therefore particularly common with the piperazine group of drugs. These extrapyramidal effects include not only Parkinsonism but also dystonic syndromes with bizarre spasms of the perioral, facial, neck and back musculature which may appear at first sight to be hysterical. These manifestations develop early in the treatment and can be promptly terminated by a reduction of the dose and the administration of anti-parkinsonian agents. They can be very frightening for the patient, who is often unable to swallow, and the spasms can be painful.

Another syndrome is "akathisia" which denotes an "impatience musculaire" or forced restlessness. When first observed it was called a "paradoxical reaction" as the patient was given a tranquilliser only to show an increased restlessness and agitation. The syndrome ranges in severity from a subjective feeling of inner restlessness to severe agitation and hyperactivity. That this again is an extrapyramidal effect is shown by its prompt response to anti-parkinsonian drugs. As mentioned above, all these extrapyramidal effects are about twice as common in women as men and though bearing a relationship to dosage there is also considerable variation between individuals.

Other Major Tranquillisers. The rauwolfia alkaloids are the other main group of drugs which have been used as major tranquillisers. Originally used in Indian medicine, they were introduced into psychiatry in 1954. On the whole they act less quickly than the phenothiazines, which are generally preferred by British psychiatrists. However, patients failing to respond to phenothiazines may improve with rauwolfia alkaloids. The recommended dose of reserpine varies from 4–15 mg. a day and the drug should be continued for several months before failure is accepted. Extrapyramidal symptoms are common, particularly Parkinsonism and occasionally akithisia. Hypotension is much commoner than with the phenothiazines and, in fact, reserpine is widely used in cardiovascular clinics for the treatment of hypertension. Depression is a not uncommon side effect and is thought to be caused by reserpine decreasing the brain concentrations of 5-hydroxytryptamine, noradrenaline and other brain amines (page 83).

There are several other drugs which are in use as major tranquillisers and which do not fall into the above groups. Haloperidol, which is a substituted butyrophenone, is one which deserves mention, as early reports suggest that, while having the general properties of a major tranquilliser, it has a particularly beneficial effect in mania. Again, extrapyramidal side effects are common.

Electroconvulsive Therapy

This is of little use in schizophrenia and in general is confined to:

(1) Relieving the affective component of some mixed conditions in which the schizophrenia is associated with a marked depression.

(2) Inducing recovery from a catatonic attack.

Prefrontal Leucotomy

This is only very occasionally indicated. As stated on page 66 the operation relieves tension and anxiety and diminishes a patient's concern and preoccupations. Delusions and hallucinations which once were most distressing, often persist after leucotomy but are no longer in the forefront of the patient's mind and no longer give rise to tension and perhaps outbursts of aggression. It does not benefit the apathetic schizophrenic and may make him even worse. In other words, the operation is indicated in those patients who would be expected to do best with the major tranquillisers. If, in such a case, adequate trials of several of the major tranquillisers have failed, a modified prefrontal leucotomy may be considered.

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Chapter 9

PSYCHIATRIC DISORDERS IN THE ELDERLY

Although the ætiological factors described in Chapter 1 are directly applicable to psychiatric disorders in the elderly, several points should be emphasised.

1. *It is uncommon for a psychoneurosis to arise for the first time after middle age.* Put another way, a personality which has withstood the rigours of sixty years or so without showing neurotic upset is unlikely to do so in old age. If neurotic symptoms occur for the first time in the elderly there is usually some underlying endogenous or organic illness.

2. *Endogenous psychiatric illnesses, arising for the first time after the age of 60 years, frequently have a well marked precipitating or reactive factor.* This stands to reason for the constitutional predisposition is unlikely to be strong or the patient would have succumbed earlier in life. Constitutional predisposition to psychiatric illness is governed by two factors, the personality as a whole and specific genetic predisposition in particular. The more stable the personality, the better the adjustment to life and the less likely are genetic factors to become manifest.

These principles are well demonstrated in the psychoses of old age. Roth compared a series of patients who developed a depressive illness for the first time after the age of 60 years and compared them with depressed patients of the same age who had had previous attacks earlier in life.

The late onset group had a significantly lower incidence of affective illness in the family, but a higher incidence of physical illness and other precipitating stresses (Table VIII). A similar position holds for schizophrenia of late onset.

3. *Physical disorders are frequently a factor in precipitating a breakdown in later years.* In Roth's series of depressions, physical illness as a precipitating or contributing cause was present

TABLE VIII. Illustrating the Significance of Various Ætiological Factors in Depressive Illnesses of Late Onset (> 60 years) compared with Depressed Patients of Similar Age who have had Affective Illnesses in the Past

(Data from Roth and Kay 1956. Kay 1959.)

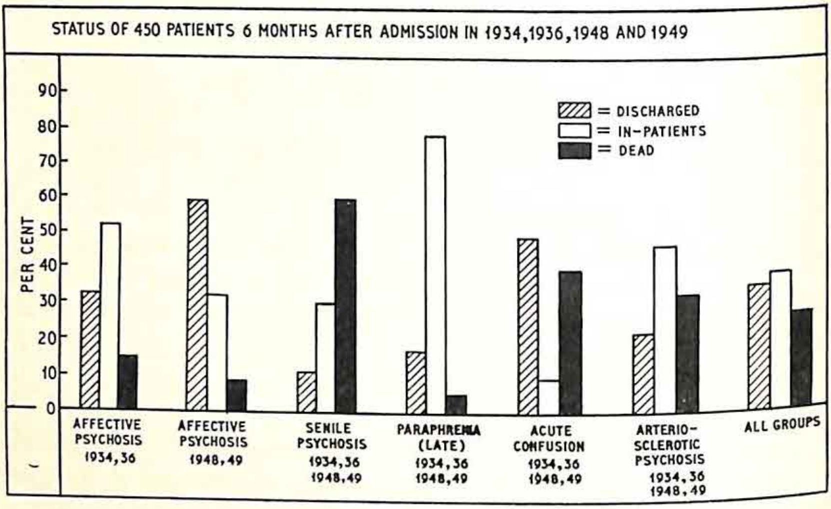
Ætiological Factors	*Genetic* Affective Illness in 1st Degree Relatives	*Psychogenic* Psychogenic Precipitant	*Physical* Associated Physical Illness
Early onset Depr.	12·4%	< 50%	43·8%
Late onset Depr.	5·7%	75%	67·5%
General Population	3%	—	—

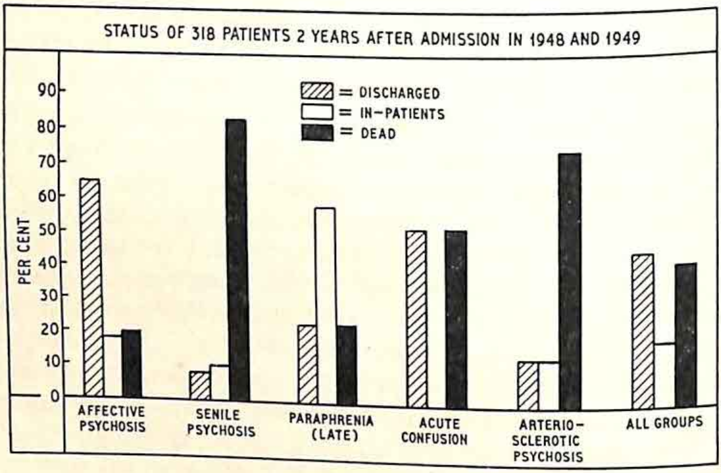
significantly more often in patients who developed their first illness after the age of 60, compared with depressed patients of the same age who had had an affective illness earlier in life. Defects of vision and hearing are common, especially in late onset schizophrenia where 25% of cases have such a disability.

4. *Social and psychological circumstances are frequently precipitating factors.* Certain personality traits seem to predispose to senile mental illness, e.g. over-conscientiousness, rigidity and sensitivity. Narrowness of outlook and lack of secondary interests make old people more vulnerable to illness, increase in physical disability, loss of relatives and economic insecurity. Loneliness, from bereavement, retirement, or resulting from a physical disability, is difficult to counter, particularly in patients with a previously neurotic personality. It is remarkable, however, how good an adjustment many patients do make, once the endogenous element in their illness has been removed.

TYPES OF ILLNESS

Five major psychiatric disorders in the elderly are arteriosclerotic dementia, senile dementia, delirious states, affective disorders and schizophrenia. Each of the five major disorders shows a distinct pattern of outcome (Figs. 6 and 7). The





FIGS. 6 and 7. Pattern of outcome of patients aged 60 and over admitted to mental hospital and differentiated according to presenting clinical picture. The proportions of discharged, dead and in-patient were ascertained by means of a follow-up study. Pattern of outcome of patients admitted in 1934–36 with predominantly affective symptoms differed from outcome in later years and has been shown separately in FIG. 6.

From Mayer-Gross, Slater and Roth, *Clinical Psychiatry*, London, 1960.

disparity between the groups is striking and emphasises the importance of correct diagnosis and treatment.

1. *Arteriosclerotic Dementia.* See Chapter 10.
2. *Senile Dementia.* See Chapter 10.
3. *Delirious States.*

Acute attacks of confusion and delirium are relatively common in old age. Frequently, they are associated with cerebral arteriosclerosis but other cerebral or general organic disorders such as heart failure or an acute infection may be the cause. Clouding of consciousness may occur as a feature of a severe and rapidly developing affective or paranoid illness but in these cases the confusion subsides in a short time to reveal the underlying psychiatric picture. Sometimes the cause cannot be identified, though nutritional deficiencies may be responsible for many of these.

A fluctuation in the level of awareness and a variation in orientation from hour to hour, is characteristic of the deliria of old age though, as with all deliria, the patient is generally worse in the evening. Clouding of consciousness in all these groups tends to be prolonged, sometimes for several weeks but, unless the patient dies, recovery is the rule. Follow-up shows that only a small proportion later become demented and so, in itself, the occurrence of a confusional episode in old age does not necessarily indicate a progressive cerebral degeneration.

Treatment is primarily that of the underlying physical disorder, but the restlessness and inaccessibility of the patient often makes rational treatment difficult. The continuous agitation may result in cardiac embarrassment and sedation is necessary to provide adequate rest and sleep. Oral paraldehyde in doses of two drachms is probably the safest and most effective drug in delirious states but in milder cases promazine (Sparine) may be used and this is preferable if the drug has to be given parenterally as intramuscular paraldehyde may result in abscess formation. Particular care should be taken over hydration and diet and since many cases are caused through vitamin deficiencies it is a good rule to supplement the diet with a vitamin B complex, either orally or in severe cases parenterally. Very occasionally electroconvulsive therapy may be used when one to three treatments may initiate complete recovery in a patient who had failed to improve to more conservative measures.

4. *Affective Disorders* (*Depression*)

The general features are similar to those in the involutional period. Anxiety and restlessness are prominent, ideas of guilt and hypochondriacal preoccupation, frequently with nihilistic delusions, are also common. Paranoid delusions and ideas of reference may colour the picture. Straightforward retarded types occur and apathy tends to be more common in the depressive disorders of old age. As mentioned above, psychoneuroses do not usually come on for the first time in old age and patients presenting with neurotic symptoms must be examined carefully for evidence of an underlying depression. Thus, elderly patients with a previously healthy personality rarely develop anxiety, restlessness, insomnia and hypochondriacal preoccupations for psychogenic reasons alone.

Early diagnosis is important, as loss of weight and physical exhaustion due to the patient's restlessness, insomnia and anorexia, can be rapid. Furthermore, it should be emphasised that successful suicides are commonest in the depressive illnesses of this age group.

Diagnosis can be difficult. Clouding of consciousness may occur with depressive disorders in old age and lack of attention and concentration by the patient may simulate the loss of memory and grasp of organic disease. If the patient was leading a normal life with no evidence of cerebral disease until the fairly rapid onset of a depressive mood, the diagnosis is likely to be one of endogenous depression.

Treatment. In other than the mild cases, treatment is best carried out in hospital where proper physical investigation and nursing can be carried out. Inanition is particularly common in this age group. Correction of nutritional deficiencies and other physical disorders, or perhaps removal from an environment associated with painful memories, such as a bereavement may in themselves result in good progress.

[illegible]

Specific Therapy. On the whole, anti-depressants are less effective than in the younger age groups. Imipramine may increase any tendency to convulsions and confusion and hallucinations have been reported from its use in the elderly. If monoamine oxidase inhibitors are used, care should be taken of any postural hypotensive side effects, and the hypertensive attacks which sometimes occur, especially with tranylcypromine, may be dangerous.

Electroconvulsive therapy is a very safe treatment with relaxants and other modern anæsthetic techniques, but care should be taken to keep the patient well oxygenated. In debilitated patients the risks with E.C.T. rise considerably and, in such cases, the dangers of treatment must be weighed against those incurred in withholding it.

5. *Schizophrenia in Old Age (Late Paraphrenia, Presbyophrenia)*

Schizophrenia arising in late age is characterised by paranoid features, arising in a well preserved personality which only shows very slow deterioration. Thought disorder, gross disorders of affect and catatonic features are all minimal. As mentioned above, 25% of the patients have serious defects of hearing or vision; and the isolation, sensitiveness and tendency to misinterpretation resulting from these disabilities seem to be major ætiological factors.

Paranoid delusions tend to concern the patient's property and money; ideas that the family or neighbours are trying to evict him, steal his money or poison him are by far the commonest. The delusions at first are well systematised, and in early or mild cases the patient may be regarded simply as "peculiar" and tolerated by his family and neighbours. More florid delusions, however, are not uncommon. Delusions that men have sexual designs on the patient or rape her at night, kidnapping and white slavery, torture, murder and similar violence are common themes. Auditory, tactile and olfactory hallucinations are often associated.

Although deterioration of the personality is slow, until the introduction of the major tranquillisers the outlook for this group of patients was poor, remissions being infrequent and the majority remaining in hospital until the end of their lives. Treatment with the major tranquillisers frequently results at least in a lessening of delusions such that the patient can be encouraged to put them to the back of his mind and, in suitable circumstances or with social aids, may return home to lead a reasonably normal life.

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Chapter 10

ORGANIC DISORDERS

General Description of Types

The ways in which the mind can respond to a physical insult are limited. Certainly it is not impossible to infer the physical cause of the brain disorder from the mental state. The mental state, however, frequently points to an organic ætiology and somatic methods of investigation may then be required to determine the specific cause. The mental state will depend first, on the nature of the disorder and second, on the patient's previous personality. Although physical factors predominate, constitutional factors influence the mental state considerably. Thus, one man will have a psychosis during a physical illness while another will have no such mental upset. Again, one patient will develop a manic response to a cerebral disease which might make another patient depressed.

The main organic syndromes are as follows:

1. *Neurasthenia.* This is characterised by irritability, weakness, depression and hypersensitivity, with a decreased tolerance to pain or discomfort, and is not uncommon after infections, exhausting experiences, head injury or intoxications.

A similar picture can be observed in certain people in the absence of any obvious organic cause and can be seen to arise from the patient's personality (page 56).

2. *Delirium.* This is an acute condition generally caused by intoxications from infections, drugs or other noxious substances such as alcohol. Occasionally it may occur in deficiency syndromes or anoxia, as in some cases of left heart failure. The essential features are clouding of consciousness, with confusion, disturbance of grasp and, therefore, impairment of memory. The patient tends to be restless, irritable and anxious with troubled sleep. His thoughts are incoherent and he is perplexed

by his disordered perceptions. The greater the clouding of consciousness, the more severe are the perceptual and affective disturbances and, therefore, these conditions all tend to be worse in the evenings or when the patient has few external stimuli to keep him in touch with reality. In severe cases the anxiousness often becomes extreme and the restlessness incessant. Suggestibility is increased, attention fleeting and perceptions disturbed so that, with an anxious mood, misinterpretation of perceptions are prominent, particularly in the half light. Hallucinations are also common. As would be expected they are fragmentary and the greater the clouding of consciousness, the more do the visual type predominate.

3. *Dementia.* As a part of a diffuse cerebral disease there is not only intellectual deterioration but loss of emotional control and changes in the personality. The most recently acquired memories and functions are the ones first lost, but whether the patient presents with intellectual deterioration or otherwise will depend to a great extent on his occupation and position in
life. Thus the finest intellectual functions such as judgement, 1
grasp and reasoning, when dealing with new situations, are usually lost early on, but may only be noticed when such
attributes are needed in the patient's occupation. Grosser 3
disturbances such as memory impairment, poverty of ideas and
perseveration occur much later. Emotional lability and lack 2
of emotional control may precede the grosser signs of intellectual deterioration and behavioural changes are often the presenting symptom. The latter are usually due to release phenomena, when underlying impulses come to the surface. The changed behaviour may only be noticed by a close relative as differences in his dress or habits (e.g. alcohol) but may lead to sexual excesses or social misdemeanours liable to bring the patient into trouble with the police.

SPECIFIC ORGANIC SYNDROMES

Classification

(1) Intoxications.
(Alcohol, morphine, bromide, etc.)

(2) Infections and exhaustive disorders.
(3) Metabolic, Endocrine and Visceral Disorders.
    (Diabetes, pernicious anæmia, pellagra, exophthalmic goitre, myxœdema, cardiac disease, uræmia, etc.)
(4) Syphilis of the Central Nervous System.
(5) Other Cerebral Diseases.
    (Disseminated sclerosis, cerebral tumour, cerebral trauma, epilepsy, etc.)
(6) Degenerative and Hereditary Brain Disease.
    (Senile dementia, cerebral arterial disease and hypertension, Huntington's chorea.)

Intoxications

Alcoholism is by far the commonest and the best example of this group (page 71), and can result in all forms of organic mental state, viz. neurasthenia ("morning after the night before"), clouding of consciousness of all degrees leading to delirium, amnesia of the Korsakoff type and dementia.

Infections and Exhaustive Disorders

Neurasthenia following influenza, glandular fever, etc., is common but clouding of consciousness and delirium may occur in exhaustive disorders and at the height of some fevers, e.g. associated with an empyema.

Metabolic, Endocrine and Visceral Disorders

All types of organic mental state may be found in these syndromes, depending on the severity and duration of the disorder. Pernicious anæmia must be considered in particular as the changes of subacute combined degeneration also affect the cerebral white matter and may lead to dementia. Myxœdema may give rise to a variety of mental symptoms, depending on the underlying personality. Paranoid syndromes with auditory hallucinations are common, but disorientation in the evening is usual and the condition progresses to dementia. It is imperative to maintain the patient in a euthyroid state. Perhaps because of minimal change of dementia, such patients cannot be relied on to take their medication unless supervised. Relapse is serious as the condition leads to irreversible brain damage. In diabetics, hypoglycæmia is frequently associated with mental changes and repeated severe attacks may lead to signs of dementia. The picture may be complicated by arteriosclerotic phenomena and diabetics seem more than usually prone to depressive illness.

Syphilis of the Central Nervous System

General paralysis of the insane leads to dementia; a simple progressive dementia is the commonest form of the disorder. If the patient's normal personality tended to euphoria, expansive behaviour and grandiose delusions will be prominent, but pessimistic personalities tend to have a depressive picture. Because of the underlying dementia there is always some emotional lability. The patient may present with neurasthenia, depression or mania and, in the very earliest stages, the dementia may be difficult to detect. Any suspicion aroused by atypical features, or abnormalities on physical examination, should lead to examination of the cerebrospinal fluid. Treatment may lead to considerable improvement in the mental state and early cases may return to a useful life.

Treatment should always be carried out in hospital, as frequently an exacerbation of the condition occurs in the first few days of specific therapy. Penicillin is the treatment of choice and a recommended course of treatment is benzylpenicillin, 500,000 units twice daily for twenty days. A repeat examination of the cerebrospinal fluid should be carried out after a month, when a marked reduction in the pleocytosis and protein level should have taken place. If this has not occurred, a further course with higher dosage should be considered.

Other Cerebral Diseases

A cerebral tumour can present psychiatrically in three main ways. First, by making it more difficult for the patient to cope with life it may lead to hysterical, depressive, or other neurotic symptoms, and an underlying organic disorder should be suspected when a stable subject develops psychiatric symptoms for no adequate reason (pages 10, 32–3). Secondly, personality changes, similar to those seen in early dementia, may be the initial symptom of a cerebral tumour. Thirdly, episodes of disorientation or frank intellectual deterioration should point at once to an organic syndrome and lead to a full neurological investigation.

Post-traumatic syndromes (post-traumatic neuroses) can readily be understood and then treated if the whole pattern, rather than the immediate part of it, is considered. The previous personality practically always shows evidence of a neurotic constitution; identical twins of patients with a post-traumatic neurosis frequently show neurotic symptoms in the absence of head injury. Hypochondriacal features are particularly common. The management of the patient's rehabilitation following a head injury has frequently been indecisive, giving rise to uncertainty in the patient's mind and this is more likely to be so after the more serious injuries. Frequent questioning as to the presence of headaches, advice to take things carefully, and unnecessarily long periods in bed or off work, all tend to emphasise the patient's disability. The quest for compensation, in particular, furthers the development of symptoms. The procedure may be drawn out over months or years during which time the emphasis is placed on the patient's symptoms and disability, rather than on his recovery. Symptoms are usually those of a neurasthenia with weakness, irritability, depression and increased sensitivity to pain or other bodily discomforts. Other neurotic symptoms may be present, depending on the previous personality. Treatment should be prophylactic. Once the condition is established, telling the patient there is nothing organically wrong with him will not, by itself, stop his very real headache. Occupation, and graded exercises, including swimming, cycling, sports, etc., should be combined with discussion of the patient's difficulties. Only in this setting will reassurance and encouragement work. Antidepressants, or other psychotropic drugs, may be used to provide some symptomatic relief, but, as in other neuroses, are not sufficient by themselves. The prognosis, as in all neurotic states, depends on the previous personality. The worse this is, the more protracted will be the disability and this is particularly so if other factors, such as compensation, militate against recovery.

Epilepsy. The most common psychiatric associates of epilepsy are dementia and personality changes.

Only a minority of epileptics show personality changes and these tend to be patients with severe and long-standing epilepsy. The "epileptic" personality is characterised by moods of irritability, surliness and temper. Patients may be stubborn and impulsive, and touchiness and paranoid attitudes are common. Personality changes are probably due partly to organic brain lesions and partly to the social effects of the disability. The feeling that fate has been unkind, the difficulties of finding employment and the fear of dismissal if one has a fit at work, the frequent social ostracism, possibly leading to a single life and loneliness, all predispose to the paranoid attitude which is a feature of many severe epileptics.

That organic changes in the brain also play a part in the personality characteristics, is suggested by the frequent presence of "organic features", such as emotional lability, rigidity, egocentricity, lack of spontaneity, etc. Furthermore, there seems to be a correlation between early onset and severity of the epilepsy, and the development of an abnormal personality. In fact, ischæmic changes in the deep centres of the temporal lobes are almost always present in long-standing epilepsy and, it is recognised that lesions in this area of the brain can produce psychiatric symptoms. The fact that the posterior cerebral artery bends round the sharp edge of the tentorium cerebelli, renders it liable to nipping during the congestive phase of a fit. In some patients the organic features progress. They become slow, have fewer ideas and express these in an increasingly circumstantial manner. Memory is affected, and the pattern becomes more and more that of a dementia, though this is rarely severe.

Organic factors in the ætiology of epileptic personality changes may also be inferred from a recent detailed study into the schizophrenic-like mental states which may be associated with epilepsy. Although the symptomatology closely resembles that of schizophrenia, these states are genetically distinct from true schizophrenia and are due to the epilepsy itself. They are associated with: (1) a demonstrable temporal lobe focus in 75% of cases, (2) a correlation between the age of onset of epilepsy and the age of onset of the psychosis, i.e. duration of epilepsy is important, and (3) evidence of brain atrophy in 66% of cases.

Other psychiatric phenomena of epilepsy are those directly associated with the seizure. Mood changes are very common. Increasing irritability before a fit, or depression during the post-epileptic dysrhythmia, are frequent. Sudden variations of mood into anger or senseless aggression may occur in the absence of any obvious fit, though some change in the level of consciousness can often be discerned.

Psychomotor attacks or twilight states may follow or terminate with a fit, but frequently they follow their course and pass off without any convulsion. They are associated with a focus in one of the temporal lobes. Clouding of consciousness is variable in degree and may show itself only as dullness and slowness in comprehension. The duration is usually very brief but some attacks may last for days, in which case psychomotor retardation is a pathognomonic feature. During the attack, feelings of depersonalisation are common, as is a depressed or anxious mood. Occasionally explosive outbursts of panic or aggressiveness may interrupt the general picture of psychomotor retardation. Hallucinations are also common. They are predominantly visual and may be very complex. The abnormal mental state is associated with electrical disturbances in the cortex and complete or partial amnesia for the attack is the rule.

Senile and Pre-senile Dementia

These degenerative disorders of the brain are constitutionally determined and it is recognised that cases of dementia often occur in several generations of the same family. The essential features common to all are a falling out of nerve cells, atrophy of the brain and dilatation of the ventricular system. Associated with this, but bearing little direct correlation with radiological findings, is a mental state typical of dementia, though frequently depressive, anxious or paranoid features may colour it.

In *senile dementia* there is no clear distinction from the usual changes of old age. It is simply a matter of degree. In old age plaques and neurofibrillary changes may frequently be found, but are abundant in cases of senile dementia.

In *Alzheimer's* type of pre-senile dementia, these changes in cell colloids are particularly profuse, the atrophy is generalised throughout the cerebral cortex and there are also changes in the basal ganglia. Because of the areas of brain involved, the spontaneity of the dementia is associated with aphasia, apraxia and dysarthria and the gait becomes affected with an increase in muscular tone. The age of onset is between 40 and 60 years and women are affected more commonly than men. It is thought that the disorder is inherited by a multifactorial mechanism, which is consistent with the view that Alzheimer's disease is a "quantitative intensification of the brain processes connected with senility and senile dementia".

Pick's type of pre-senile dementia is also commoner in women and the onset is between 40 and 60 years of age. In other respects it shows distinctive features. It is probably transmitted by a dominant gene; on histological examination the brain cells are swollen and contain argentophil globules. The brain atrophy is circumscribed and affects particularly the frontal and temporal lobes. Aphasia is common, but parietal and basal ganglia disturbances do not occur.

The duration of both Alzheimer's and Pick's disease is about seven years.

Huntington's Chorea

This is a relatively rare degenerative condition which is transmitted by a single Mendelian dominant gene which has a manifestation rate of almost 100%. The brain atrophy shows itself particularly in the frontal areas and the caudate nucleus and putamen are also affected.

Huntington's chorea comes on earlier and the course of the illness is much slower (ten to fifteen years) than either Alzheimer's or Pick's disease. The majority of the cases have an onset in the middle of the fourth decade with involuntary movements of the face, hands, or shoulders and these are particularly noticeable when the patient is tense or anxious. The gait is frequently affected and characterised by jerkiness and abruptness. Sooner or later the apathy and inertia of the dementia becomes apparent, and depressive or paranoid features are a not uncommon complication.

Obviously, anyone who comes from a family with Huntington's chorea should obtain expert advice before marrying or having a family.

Arteriosclerotic Dementia

As distinct from the senile andpre-senile dementias, where the disorder is generalised, the atrophy in arteriosclerotic dementia is patchy. Perhaps because of this, the basic personality is often well preserved and insight may be well retained till late in the disorder. Emotional lability is well marked and when moved the patient may lose control and lapse into uncontrolled weeping or laughter.

Symptoms appear following one or several minor cerebrovascular accidents, during which the patient is confused. The disorientation clears but the patient is left with some residual impairment, often increasing in a step-ladder fashion with each succeeding episode.

THE MANAGEMENT OF A DEMENTING PATIENT

This depends to a considerable degree of social considerations. On the one hand is the abnormal behaviour of the patient, his tendency to wander and get lost, nocturnal restlessness leading to falls, turning on gas taps without lighting them, incontinence, feeding difficulties, paranoid ideas, or noisiness at night perhaps as a result of hallucinations. Against this must be weighed the tolerance and ability of the family to look after the patient. Although many families may refuse to accept what may seem only a minor nuisance, others are averse to letting the patient be sent to a "mental place". At times the doctor should insist on transfer to hospital for the sake of the patient's daughter and her young family, pointing out that when someone becomes as ill as the patient, he is less concerned with, or aware of, his surroundings and, given a couple of weeks to settle into the hospital, is often less distressed than at home, because of the better facilities and consequent lessening of restrictions.

Management at home will entail careful attention to nutrition, hygiene and physical health. In particular, care should be taken that the bowels are properly opened. Urinary, and especially fæcal incontinence is often a sign of retention of fæces. If rectal examination confirms this, "Dulculax" suppositories are usually effective and less exhausting than an enema. However, relapse is common and the occasional use of a senna preparation (such as "Senokot") may be necessary until the rectum regains its tone and sensitivity.

The patient should be kept out of bed and moving, as long as possible. Needless to say, loose carpets should be removed and highly polished floors are dangerous. A urinal or bedside commode will prevent unnecessary wandering at night.

In the absence of relatives, mild cases can be kept at home with the assistance of the W.V.S. and other social services who can help in providing meals, shopping, etc. It is generally advisable for the doctor to telephone the local mental welfare officer whose social worker will then visit the patient to assess his requirements from a social point of view, and will herself arrange for such assistance as is necessary, at the doctor's request.

Old people are often forgetful of electricity, gas, rent and other bills and, in cases of dementia, paranoid ideas may complicate matters and be a source of considerable embarrassment to the family. In such cases the patient should be persuaded to place his affairs in the hands of a solicitor. If the patient is too ill for this course of action to be followed, application can be made through a solicitor to the Court of Protection, who will then look after the patient's financial affairs.

Drugs should be used sparingly to induce sleep and relieve excessive restlessness, perhaps due to paranoid ideas of greater or lesser degree. The non-piperazine type of phenothiazines are to be preferred on the whole because of their sedating effect. Promazine (Sparine) and thioridazine (Melleril), in doses of 50–100 mg. twice or three times a day or at night, perhaps combined with a mild hypnotic, are effective and widely used.

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Chapter 11

CHILD PSYCHIATRY

Problem children are children with a problem; no more, no less. It simply happens that a child's problems are somewhat different to those of an adult and he frequently responds to feelings of anxiety and insecurity by behavioural disturbances.

A child's world centres round his parents and particularly the mother. It is to them he turns for everything he needs and to protect him from his real or imaginary fears. Thus, confidence in his parents gives the child a sense of security and confidence to do things, knowing that they are always at hand if necessary. This feeling of security comes from the knowledge that he is loved, the way his parents look at him, pick him up, talk to him and generally demonstrate their affection. Anything tending to make the child feel he is not wanted will lead to insecurity, anxiety and maybe behaviour disorders. As always, there is an interplay between the subject and environment, the child and his parents.

THE CHILD

General Constitutional Variations

Any mother knows that some children are difficult and others easy to bring up, and certainly some children need a far greater and more consistent demonstration of love and affection than others. It is only recently that investigations into the constitutional differences between children have been undertaken, but the first reports suggest that reliable pointers can be detected within the first few months of life which will indicate a child's future pattern of behavioural response. Depending on the individual child, widely different behavioural disorders may result from a similar source of insecurity. Thus, a feeling of rejection may result in attention-seeking behaviour on the one hand or withdrawal or "model" behaviour on the other.

Intelligence

This is obviously important in determining a child's capacity to cope with various aspects of life and should be considered when attempting to understand a particular child's difficulties.

General intelligence may be defined as "the general ability to adapt to new situations by means of purposeful thinking". This capacity is determined largely by hereditary factors but is probably also influenced by upbringing. The mode of inheritance is thought to be a multifactorial one, similar to that of height, intelligent parents tending to have brighter than average children. As would be expected with a multifactorial inheritance, the range of I.Q. scores show a normal distribution for scores above 45. Below this level there is a predominance of cases of subnormality, caused by a specific genetic abnormality (mongolism, phenylketonuria, etc.) or birth injury. (Fig. 8.)

It should be emphasised that general intelligence is a capacity which can be developed or allowed to remain relatively dormant; education, general upbringing and nutrition are important in this respect. Thus, a child from a good home who has had the benefits of a good education will tend to develop his capacity to a greater degree than a less fortunate child. Furthermore, it should be realised that intelligence is only one part of a child's make-up and his success in later life will also depend on his general stability, drive, ambition, persistence, etc. Thus a well-adjusted child of average intelligence is frequently more successful in later life than a neurotic or less well-adjusted child with superior intellectual endowments.

Below the age of 16 years, intelligence is measured by applying the formula:

$$\frac{\text{Mental Age}}{\text{Chronological Age}} \times 100.$$

A child's ability to accomplish the tests which an average child of a given age can do, determines his mental age. A very bright child of six, who could solve problems that 50% of nine year olds could solve, would have a mental age of nine and his I.Q. would thus be $\frac{9}{6} \times 100 = 150$. On this basis, a nine year old child whose mental age is also nine would have an I.Q. $\frac{9}{9} \times 100 = 100$, but a twelve year old child with a mental age of nine would be retarded, having an I.Q. $\frac{9}{12} \times 100 = 75$. 50% of all children have I.Q.'s between 90 and 110, only one in 200 having an I.Q. below 60 or above 140. I.Q.'s below 70 are usually those of mental defectives.

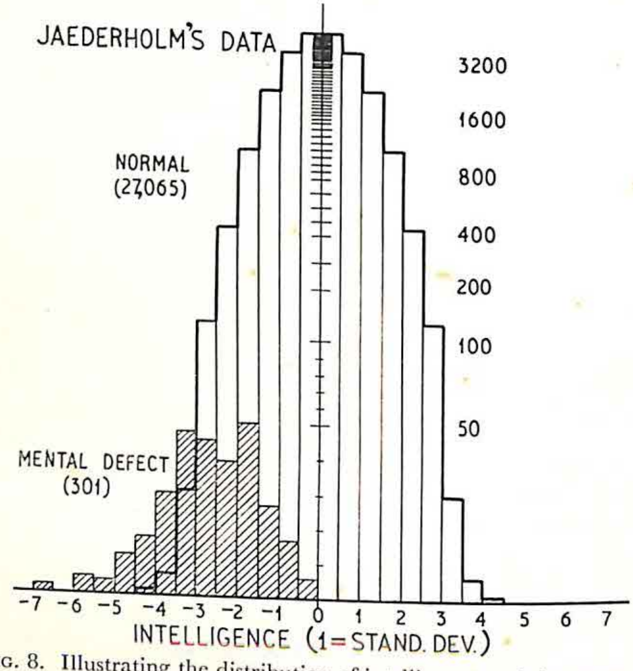

FIG. 8. Illustrating the distribution of intelligence and the excess of cases in the subnormal range, due to single abnormal genes.

From Karl Pearson. *Ann. Eugen.* 1961. **4.** 362.

Specific Abilities

The main specific abilities which can be separated are verbal ability, verbal fluency, numerical ability, spatial ability, perceptual ability, memory and inductive reasoning. These all have some correlation with general intelligence but, given a certain I.Q., one child will show a special aptitude for writing and another for mathematics. Specific abilities can be tested and are the basis for tests used for vocational guidance. A defective or poor verbal capacity can give rise to considerable difficulties at school, often unrecognised.

Age

Age is important in determining the susceptibility of the child to the atmosphere at home and for determining symptoms with which a disturbed child will present.

As a general rule, the younger the child the more susceptible he is to disturbances in the home. Separation from his mother in the first two or three years is much more serious than separation later on, when the child has already developed a knowledge of his mother's love and a true sense of security. Similarly, any upheaval such as the arrival of a new baby, hospitalisation of the child or his mother, or parental disharmony, perhaps with an associated irritability and lack of tolerance, may all cause distress to a young child and, if possible, measures should be taken to protect the child or compensate him for them.

Age similarly has a role in determining symptomatology. Negativism is a normal phase in child development at about two years. Thus it is not surprising that symptoms such as feeding difficulties and breath holding attacks are common at this period. By the age of three or four years, breath holding is substituted by temper tantrums but again, after this age, a child rarely throws itself on the floor. True muscular tics and nail biting tend to occur after the age of six years and especially at eight to ten years of age. Aggression, bullying and cruelty is another example of the influence of age, occurring especially between the age of three and five and then again at ten to twelve years.

Genetic Predisposition

In an earlier part of this book, mention was made of the role of a genetically determined predisposition in the ætiology of asthma (page 50), and the relation of cyclical vomiting and certain cases of unexplained recurrent abdominal pain to migraine and a family history of migraine is well established.

Less widely known is the presence of a genetic predisposition in some cases of *enuresis*. Diurnal enuresis, or those cases of nocturnal enuresis where the child has been dry for a long period and then starts wetting, are virtually all psychogenically determined. However, many cases of primary nocturnal enuresis, i.e. cases who have never been properly dry at night, have a physiological basis which is genetically determined. In these cases there is frequently a history in parents or siblings of enuresis and the affected parent, when dry, frequently has to get up at night to micturate. On investigation, these children seem less able to concentrate their urine at night and there would seem to be a physiological defect of the kidney. Secondary psychogenic symptoms are, of course, not uncommon but treatment should be aimed at the underlying disorder. This entails water restriction at night and conditioning treatment to train the patient to wake when the bladder is full. The patient sleeps on a special conditioning blanket. As soon as the patient begins to pass urine, electrical contact is made which rings a bell. This rouses the patient and a conditioning process is built up between a full bladder and arousal.

Physical Defects

Relatively minor physical defects may predispose to psychological difficulties or at least influence the symptoms with which the child presents. Partial deafness is often unrecognised and may cause a child to be chastised at school for inattention or laziness. Minor disabilities of the urinary tract may predispose to enuresis, while disorders of the locomotor system, asthma, or other disabling conditions may cause the child to be over-protected or in other ways become isolated from his fellows.

THE ENVIRONMENT

The mother's attitude is, of course, predominant because it is to her that the child looks for his needs. In the early years of life the father's influence is more indirect, in his effect on the general atmosphere and happiness of the home and the support he affords to his wife. Later in life the child should look to his father for an example to follow and someone with whom he can identify.

A child thrives in a secure, contented home. Neurotic or otherwise disturbed parents produce disturbed children and, although genetic factors undoubtedly play their part, the insecure environment may well be the predominant factor in the behavioural problems of these children. Unhappy mothers may reject the child or be over-possessive; certainly they will tend to be less predictable in their behaviour. The more stable and contented the mother, the more likely is the child to develop normally.

There is no danger of giving a child too much love and affection. Some mothers think that a child will be "spoilt" by too much love or feel that they may be over-possessive or over-protecting. These latter attitudes only arise, however, from a morbid relationship and usually stem from the mother's own neurosis. In particular the child requires extra affection when a new baby arrives, when he first goes to nursery or primary school, or when he is feeling out of sorts and is naughty and bad-tempered. This is not to say that the child should not be corrected when he misbehaves, but a wise mother can usually tell when the naughtiness arises from insecurity or from a feeling of rebellion.

Delinquency is thought to be predominantly environmental in ætiology and serves as a good example of the effect of early upbringing on later behaviour. Scott classifies delinquency into four types: (*a*) Trained, (*b*) Reparative, (*c*) Untrained, (*d*) Rigid Fixations.

The Trained type of delinquent often comes from a family or district where there is a subculture for crime. Stealing, truancy, etc., is carried out either for gain or prestige and retraining, punishment of moderate severity, with some befriending is the treatment of choice.

The Reparative type of delinquent commits his offence for emotional reasons. Thus whereas the first type will steal from anyone, for gain or prestige, the reparative delinquent will frequently steal only from his mother, as compensation for lack of affection, though later secondary material advantage may become important. In these cases, an attempt at correcting the emotional disturbance is usually necessary before retraining can be successful.

The Untrained offender has frequently had a poor, inconsistent upbringing, and the father may have been weak, absent or in some way not have presented himself as someone with good standards whom his son could respect and try to emulate. These children try to resist temptations but are weak, vacillating and easily led. They require long-term supervision and support.

Finally, and briefly, there are a group of delinquents whose behaviour is grossly abnormal and is based on rigid fixations. The offences are stereotyped, the child may appear unconcerned and dissociated from his actions, and unlike the other types his behaviour is difficult to understand. Treatment is extremely difficult.

TREATMENT

The first thing to decide is whether the child's behaviour is, in fact, abnormal. The experienced family doctor realises the wide variation of normal behaviour and that symptoms such as head banging (1–2 years), negativism (2–3 years), stuttering (3–4 years) and thumb sucking are frequently found in perfectly healthy children.

When the child is disturbed, the approach should be on straightforward commonsense lines. The doctor should see the mother by herself and this is best done in the home where he can better get a true assessment of any family difficulties.

As mentioned above, the reason for the child's disturbance may be:

(1) Predominantly a disability in the child.

(2) Predominantly environmental, e.g. disharmony with the mother.

(3) A mixture of both the above factors.

Common examples of disabilities which may lead to psychiatric disturbance are genetic predisposition to enuresis, subnormal intelligence, partial deafness (school) and other physical disorders. A child whose verbal ability is poor in relation to his general level of intelligence may be heavily handicapped at school. Extreme forms are sometimes referred to as "word blindness" leading to inability to read, but minor degrees are commoner and may be missed because of secondary psychological symptoms. Obviously in these cases treatment should be aimed at the underlying reading disability and individual lessons or transfer to a special school may be indicated. The opposite state of affairs is probably more common. Here the verbal ability is higher than the general intelligence and the child is thought to be brighter than in fact he is. In either case it is surprising how often the child responds simply to the knowledge that someone is going to help, and frequently the secondary psychological symptoms clear up as the original difficulty is corrected.

It stands to reason that many children cope in spite of such disabilities as the above and only break down under some additional environmental stress. Such disabilities may make a child more liable to psychological breakdown and will also determine the nature of his symptoms. More difficult to assess are general personality factors but there is no doubt that some children, because of their personality make-up, are more vulnerable to psychological breakdown than others.

Bearing in mind the child's personality and possible innate disabilities, the doctor should look at the environmental factors and here the mother and general home circumstances are all-important. As stated above the happier and more contented the mother, the better she is for the child. Thus minor degrees of depression, tension or irritability may make the constant restriction and responsibilities of the family irksome. Disharmony or lack of support from her husband may play a part or he may simply neglect to take her out in the evenings and so give his wife a break from the home. Other common problems are lack of space for young children, particularly when they are almost ready for school and when the weather or other circumstances makes it impossible for them to play outdoors. In cases such as these, treatment of mild depressive illness, anæmia or other minor physical ailments in the mother, a talk to the husband, or advice about nursery schools, home help or baby sitter, might be all that is needed.

Frequently, however, the difficulty is more deepseated and stems from a more serious defect in the mother's make-up as a result of which she is neglectful, positively rejecting or, on the other hand, over-possessive. Such mothers need to be treated with continued support as befits their psychoneurosis and in most cases the child's natural resilience will result in spontaneous improvement once the environmental stress, due to the mother's ill-health, is relieved. In more severe cases the child himself may need treatment, which can be provided at the local Child Guidance Clinic. Here a full assessment is made by a psychiatrist, psychiatric social worker and educational psychologist and treatment is offered to both the mother and the child as is indicated. In particular careful consultations are made by the clinic with the educational authorities and the school, whose help can be invaluable.

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Chapter 12

MENTAL DEFICIENCY

The Mental Health Act (1959) classifies mental deficiency into "severe subnormality" and "subnormality", defined in the following words. "'Severe subnormality' means a state of arrested or incomplete development of mind which includes subnormality of intelligence and is of such a nature or degree that the patient is incapable of living an independent life or of guarding himself against serious exploitation or will be so incapable when of an age to do so."

"'Subnormality' means a state of arrested or incomplete development of mind (not amounting to severe subnormality) which includes subnormality of intelligence and is of a nature or degree which requires or is susceptible to medical treatment or other special care or training of the patient."

This section of the Act is deliberately worded to allow for flexibility as the practical problem for the care of the child is a social one—to what extent is a mentally handicapped patient able to fend for himself? Factors other than the lack of intelligence may thus be of importance.

Without some modicum of intelligence an independent adaptation to life is impossible. Thus, patients with an I.Q. below 50 will be unable to fend for themselves in the community. Higher up the scale in the 60–80 range, however, temperament and character will make all the difference between being able to live an independent life or not. Thus marked instability or anti-social behaviour may necessitate institutional care, whereas a patient with a lower level of intelligence but who is stable, might be able to support himself and a family.

There are two main groups of mental defectives, the normal variants and those due to some specific cause. The analogy is between normal people of short stature and dwarfs such as achondroplasiacs. (Fig. 8.)

MENTAL DEFICIENCY AS A NORMAL VARIANT

As mentioned in Chapter 11, intelligence is inherited multifactorially and the range of I.Q. follows a normal distribution down to a level of about 50. Patients with an I.Q. much below average may have to attend special schools for the educationally subnormal (E.S.N.). They are slow to learn and have difficulty in adapting to new situations yet they are often quite capable of being trained to do work of varying degrees of economic value, especially if the work is of a simple repetitive nature. To what extent they can lead an independent life depends on other personality factors. Unfortunately some may be easily led astray and delinquent offences or sexual promiscuity may then necessitate their close supervision. Greater recognition is now paid to the role of environmental factors. Parental neglect and faulty upbringing affect the child with a low intelligence just as they do the bright child, and in such circumstances he will not make full use of his innate ability.

MENTAL DEFICIENCY DUE TO SPECIFIC ABNORMAL GENES

Phenylketenuria accounts for 1% of all institutionalised mental defectives. One person in every 15,000 suffers from the disease. It is caused by a recessive gene as a result of which the patient is unable to metabolise phenylalanine to tyrosine. The blood phenylalanine rises and, among other abnormal metabolites, phenylpyruvic acid appears in the urine and gives rise to the characteristic green colour reaction with ferric chloride. Secondary abnormalities occur in indole and catechol amine metabolism. The patient typically has fair hair, blue eyes and a fine-textured skin. The mental deficiency is gross and epilepsy is not uncommon. However, the fœtus is protected in utero by the mother's liver and the child is normal at birth. Early diagnosis and treatment with a low phenylalanine diet is thus of paramount importance.

Galactosuria frequently results in cataract, liver damage and mental deficiency. The patient is unable to metabolise galactose, which seems to be toxic to growing tissues and which appears as a reducing substance in the urine. Early diagnosis is vital as the elimination of lactose and galactose from the diet will prevent further damage.

Other genetically determined conditions include tuberose sclerosis, some cases of microcephaly and cerebral palsy and numerous other conditions and malformations which, taken individually, are rare.

Mongolism (Down's Syndrome). One in every 700 births is of a mongol and mongols account for about 5% of institutionalised mental defectives. Their I.Q. is in the range 20–40 and so, although unable to look after themselves, they are not as handicapped as many patients in this group of genetically determined conditions. The physical signs are present at birth and include a small rounded skull, with flattened face and occiput. The palpebral fissures are narrow and have a downward and inward slope, and epicanthic folds are frequent. The tongue is large and may be fissured, the muscles hypotonic and joints abnormally flexible, and abnormal palmar creases may be found. Mongols are dwarfed in stature, have a high incidence of congenital heart disease and frequently die in early life from intercurrent infection.

Most cases of mongolism are associated with a triploid chromosome 21. In most cases this is caused by non-disjunction (non-separation) of the chromosome pair during haploid division of the ovum in the mother's ovary. If this process goes wrong, both members of the pair may find themselves in the same gamete, i.e. one cell will have two 21's and the other none at all. Each normal male spermatozoon brings with it its single chromosome 21 and fertilisation thus results in a zygote with trisome 21. Such non-disjunction occurs more commonly in older women and it has been known for a long time that the mothers of mongol children tended to be older than usual. Less common ways of acquiring the triploid chromosome 21 occur (e.g. translocation) and account for young mothers with mongol babies.

MENTAL DEFICIENCY DUE TO ACQUIRED BRAIN DAMAGE

(*a*) *Damage before Birth.* The fœtus is particularly susceptible to damage in the first two months of intra-uterine life and at this time infections such as Rubella (causing cataract and deafness) and noxious substances such as emetine and thalidomide are particularly dangerous. How far other infections, especially virus infections, are important is uncertain, as is the role of nutrition, though experimental nutritional deficiencies in animals are well known to cause abnormalities in the fœtus.

(*b*) *Damage at Birth* may be caused by intracranial hæmorrhage, or prolonged anoxia, both of which may result in cerebral palsy. Rhesus incompatibility may lead to a stillborn child. Frequently, however, the rhesus child is normal at birth but develops jaundice, kernicterus and brain damage in the days following parturition. The immature liver is unable to conjugate the bilirubin liberated from destroyed red blood cells, and this unconjugated bilirubin is able to pass through the immature blood-brain brain barrier to exert its toxic effect on the brain. In these cases exchange transfusions can prevent a gross cerebral palsy and the child may then be normal.

(*c*) *Damage after Birth* is usually due to encephalitis or meningitis but also occurs as an accompaniment of cretinism.

TREATMENT

With the exception of such disorders as galactosuria, phenylketenuria and cretinism, treatment is confined to general care, and training the child to use what intelligence it has. In particular, associated physical disorders such as partial deafness should be looked for and, if present, corrected.

Suitable education in special (E.S.N.) schools, followed by training for a simple type of job, may make all the difference to a patient's ability to live an independent life. Early diagnosis is important. The earlier the special training the better, as attendance at an ordinary school and perhaps punishment for alleged laziness may result in secondary neurotic symptoms.

The more severe degrees of subnormality are best cared for in a long-stay hospital, particularly if there are associated neurological disabilities. Hospitalisation may also be needed in those cases of milder subnormality where temperament, instability, etc., make life outside hospital unwise. In these latter cases, maturation may lead to improvement sufficient to enable discharge in due course.

The following are some factors adapted from Illingworth which should be taken into account when considering institutional care:

(1) Degree of retardation and type of defect—e.g. the hyperkinetic and destructive child.

(2) Age of child. The guilt of the mother may not be so intense if the child is kept at home for a while. Severely subnormal children become an increasing problem as they get older and heavier.

(3) Parental attitudes—e.g. rejection.

(4) Effect on siblings—younger sibs may suffer because the mother is occupied with the defective child all the time.

(5) Effect on the prevention of a further pregnancy. The mother may feel that another child would be too much for her to cope with.

(6) Social circumstances—e.g. overcrowding.

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APPENDIX I

THE MENTAL WELFARE OFFICER

The Mental Welfare Officer is employed by the Local Authority to care for those persons in the community who are mentally ill. Because of their knowledge of the social services, their close relation with the psychiatric hospitals and their own services in visiting patients on request, they can be of considerable help to the general practitioner.

Admission to Hospital

The mental welfare officer possesses the statutory forms which are necessary for a patient's compulsory admission to hospital and, on request, can arrange the actual admission and transfer of the patient. He will also attend to any incidental difficulties caused by such hospitalisation, such as the care of young children or elderly parents.

Discharge from Hospital

On discharge from hospital, patients may be referred to the Local Authority mental welfare services for after-care. Social clubs, day rehabilitation centres, day hospitals, and hostels may be available and it is the mental welfare officer's role, as a social worker, to supervise these activities and, in doing so, keep an eye on the progress of the patient.

The Subnormal and Severely Subnormal

Mental welfare officers are also responsible for the supervision and general guidance of all subnormal and severely subnormal persons who reside in their area. This includes ensuring that all of them, up to the age of 16 years, attend training centres, which is now compulsory, and finding employment for those who are capable of work.

APPENDIX 2

ADMISSION OF A PATIENT TO HOSPITAL

The chief provisions of the Mental Health Act, 1959, as they concern general practitioners are as follows:

Terminology

Section 4.—(1) In this Act "*mental disorder*" means mental illness, arrested or incomplete development of mind, psychopathic disorder, and any other disorder or disability of mind; and "mentally disordered" shall be construed accordingly.

(2) In this Act "*severe subnormality*" means a state of arrested or incomplete development of mind which includes subnormality of intelligence of such a nature or degree that the patient is incapable of living an independent life or of guarding himself against serious exploitation, or will be so incapable when of an age to do so.

(3) In this Act "*subnormality*" means a state of arrested or incomplete development of mind (not amounting to severe subnormality) which includes subnormality of intelligence and is of a nature or degree which requires or is susceptible to medical treatment or other special care or training of the patient.

(4) In this Act "*psychopathic disorder*" means a persistent disorder or disability of mind (whether or not including subnormality of intelligence) which results in abnormally aggressive or seriously irresponsible conduct on the part of the patient, and requires or is susceptible to medical treatment.

(5) Nothing in this section shall be construed as implying that a person may be dealt with under this Act as suffering from mental disorder, or from any form of mental disorder described in this section, by reason only of promiscuity or other immoral conduct.

Informal Admission

Section 5 enables patients requiring treatment for mental disorder to enter any hospital or mental nursing home *without legal formality*.

COMPULSORY DETENTION

General

Patients may be admitted to, or detained in, hospital compulsorily when this is considered advisable:

(1) "in the interest of the patient's own health or safety"
(2) "with a view to the protection of other persons".

The order of a judicial authority is no longer necessary and the responsibility is placed upon the patient's medical advisers and his nearest relative. A mental welfare officer may act for the nearest relative in cases of urgency when the relative is not available. He may also act, after consultation, on his behalf if the relative prefers it.

The procedure for all forms of compulsory detention is as follows. One or two doctors independently examine the patient and, if satisfied, make a recommendation on the appropriate form for compulsory admission to hospital. Following this, the nearest relative, or the mental welfare officer acting on his behalf, applies on another form for admission to the appropriate hospital. Neither recommending practitioner may be the applicant, nor related by family nor professional associations to the applicant, nor benefit pecuniarily by any fees made on the patient's account for his maintenance.

Emergency Admission (Section 29)

In cases of urgent necessity an emergency application may be made by any relative or mental welfare officer, founded upon *one medical recommendation*. The application shall include a statement that it is of urgent necessity for the patient to be admitted and detained under observation and that the usual procedure would cause undesirable delay. Such emergency application expires in 72 hours from the time of the patient's admission, unless a second medical recommendation is received by the managers of the hospital.

Compulsory Admission for Observation (Section 25)

Two doctors are required to examine the patient and recommend admission for observation on the grounds:

(*a*) that the patient is suffering from mental disorder of a nature or degree which warrants his/her detention in a hospital under observation for at least a limited period, and

(*b*) that the patient ought to be so detained:

(i) in the interest of the patient's own health or safety
(ii) with a view to the protection of other persons.

One of the doctors must be approved by the Local Authority as having special experience in the diagnosis and treatment of mental disorders, the other should be the patient's regular medical attendant, unless a good reason can be given why this is not practicable. Once the application has been made by the relative, the patient must be admitted to hospital within 14 days. An order under Section 25 enables the patient to be detained in hospital for a period of 28 days for "observation", during which time he may be given any treatment which is considered necessary.

Many patients with depressive illnesses or early schizophrenia are unable to appreciate the necessity for hospitalisation or are so indecisive that they may well discharge themselves soon after arrival. It is in these patients who would be expected to improve quickly with treatment that Section 25 is most useful. As soon as treatment becomes effective the order is rescinded, and even if the patient needs to stay in hospital longer than the 28 days he has usually improved sufficiently to agree to stay informally.

Compulsory Admission for Treatment (Section 26)

When detention in hospital for a prolonged period is required, application for admission should be made under Section 26. The patient's usual medical attendant and a doctor recognised by the Local Authority as having special experience in the diagnosis or treatment of mental disorder must agree that the patient is suffering from one or more of the following:

Mental illness, severe subnormality, subnormality or psychopathic disorder, of a nature or degree which warrants his/her detention in a hospital for medical treatment within the meaning of the Act, and that it is necessary

(i) in the interests of the patient's health or safety,
(ii) for the protection of other persons,

that the patient should be detained in hospital.

Patients suffering from a psychopathic disorder or subnormality cannot be admitted to hospital under Section 26 if they are over the age of 21 years or, if already in hospital, be detained under this section after the age of 25 years.

Under Section 26 the patient may be detained in hospital for one year, renewable in the first instance for a period of one year and thereafter, if required, for successive periods of two years. After a period of six months the patient may, if he wishes, apply to a Mental Health Review Tribunal for their opinion on his fitness for discharge from hospital. The order under Section 26 may be rescinded at any time by the medical officer in charge, the hospital managers or the nearest relative of the patient. If the medical officer advises against discharge, the patient or nearest relative has access to a Mental Health Review Tribunal.

APPENDIX 3

CRIMINAL LAW

Murder

Public interest in criminal responsibility was aroused in 1843 when a man called McNaghten killed Sir Robert Peel's private secretary in mistake for the Prime Minister himself. It was apparent that McNaghten had delusions of persecution which had influenced his behaviour for some time and it was because of these delusions that he had tried to murder Sir Robert Peel. McNaghten was acquitted from the charge of murder and after the trial the Lords of Appeal in Ordinary were asked to confer and in particular to answer certain specific questions. Their answers have guided the courts ever since. The crux of their opinion is that, to establish a defence on the grounds of insanity "it must be clearly proved that at the time of the committing of the act the accused party was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing; or if he did know it, that he did not know that he was doing what was wrong".

In the Homicide Act of 1957 the doctrine of "*diminished responsibility*" became embodied in English Criminal Law. The Act states that "where a person kills or is a party to a killing of another, he should not be convicted of murder if he was suffering from such abnormality of mind (whether arising from a condition of arrested or retarded development of mind or any inherent causes or induced by disease or injury) as substantially impaired his mental responsibility for his acts and omissions in doing or being a party to the killing". Under the above circumstances the verdict will be one of manslaughter and not of murder.

It sometimes happens that the question of insanity is raised after the prisoner has been found "guilty" and sentenced. In such cases the Home Secretary arranges for the prisoner to be examined by a special panel of doctors and, as a result of their opinion, he may authorise the prisoner's detention in a Broadmoor Institution.

Offences other than Murder

Cases involving offences other than homicide are dealt with under the Criminal Justice Act of 1948. Where a person is charged before a court of Summary Jurisdiction with an act punishable by imprisonment and the court is satisfied:

(*a*) that the person did the act

(*b*) on the evidence of at least two doctors that he is suffering from a mental disorder

(*c*) and that he is a proper person to be detained,

the Court may order him to be detained in a mental hospital. Such a person may also be remanded in custody or on bail for the purposes of a report on his mental and physical state before the court takes further action.

The Suicide Act of 1961 abrogates the law whereby it was a crime for a person to commit suicide. Furthermore, unless there is specific reference to the contrary, life assurances taken out while the patient was mentally well will be honoured if the person commits suicide because of subsequent mental illness.

Fitness to Plead

The accused should be mentally capable of instructing Counsel, appreciating the significance of pleading "guilty" or "not guilty", challenging a juror, examining witnesses and understanding and following the evidence and court procedure. After the accused person is found "insane on arraignment" the question of whether he was suffering from a mental disorder at the time the crime was committed is not dealt with and the prisoner is detained in a Broadmoor Institution "until Her Majesty's pleasure shall become known".

Admissibility as a Witness

A person of unsound mind may be admitted as a witness in a trial if found by the court to be capable of giving evidence, but his mental state must always be taken into account in assessing his reliability. Similarly a person with a mental disorder may make an affidavit if his evidence is likely to be reliable.

CIVIL LAW

Contract

A *contract* made before the onset of a mental disorder is binding. A person with a mental disorder may make contracts for the necessaries of life and such contracts are binding. He may also make contracts for articles other than necessaries, but such contracts are not binding if they are such as would not have been made but for the mental disorder at the time of making the contract.

Marriage and Divorce

A marriage is not valid if at the time of marriage either party is so mentally disturbed as not to appreciate the nature of the contract. In fact this can rarely be shown to be the case.

Nullification of marriage may take place if the petitioner did not know at the time of marriage that the other party was suffering from a mental illness, or subnormality, or was subject to recurrent bouts of mental illness or epilepsy. The petition has to be filed within a year of the date of marriage.

A petition for divorce may be presented on the ground that the respondent is "incurably of unsound mind and has been continuously under care and treatment for a period of at least five years immediately preceding the presentation of the petition".

Testamentary Capacity

Only a person with a "sound disposing mind" can make a valid Will. The problem is not whether the person is sane but whether his mental capacity is adequate to the Testamentary Act. Testamentary capacity may well be consistent with mental disorder. Each case must be determined on its merits.

In particular when the person makes his Will he should be able to recall and keep clearly in his mind:

(*a*) the nature and extent of his property,
(*b*) the persons who will have claims upon his bounty.

His judgement and will must be so unclouded and free as to enable him to determine the relative strength of those claims.

The Court of Protection

This is retained under the Mental Health Act of 1959 for the management of the property of mentally ill patients. A judge, nominated by the Lord Chancellor, orders the control and management of property and the carrying out of any contract entered into by the patient, and he may also appoint a receiver when necessary.

Appendix 4

PSYCHOTROPIC DRUGS

TABLE I TRANQUILLISERS

Approved Name	Trade Name	Daily Dosage (mg.)		Principal Side Effects	Principal Toxic Effects	Indications	Limitations and Disadvantages
		Low	High				
					PHENOTHIAZINES		
Dimethylamine Series Promazine	Sparine	75	1000	Drowsiness, Hypotension. Parkinsonism uncommon.	Dermatitis. Rarely blood dyscrasias. Increased tendency to seizures.	As tranquillo-sedative in neuroses and psychoses. Especially useful in agitated states in old age.	Little therapeutic effect in schizophrenia.
Chlorpromazine	Largactil Thorazine	75	1000	Drowsiness, Hypotension and œdema. Parkinsonism 8%. Breast engorgement and lactorrhœa.	Skin reactions. Jaundice 1·5%. Blood dyscrasias 0·3%. Increased tendency to seizures.	Overactivity and disturbed behaviour in schizophrenia and mania. Acute and chronic organic mental states. Mental defectives and disturbed children.	Little use for inert and apathetic schizophrenics. Limited value for anxiety states.
Trifluopromazine	Vespral Vesprin	50	300	Drowsiness. Hypotension. Parkinsonism.	Rarely blood dyscrasias.	As above.	As above.
Methotrimeprazine	Veractil	50	700	Drowsiness. Parkinsonism. Frequently hypotension.	Rarely jaundice. Blood dyscrasias.	As above. Greater sedative action.	As above. Hypotension may be troublesome.
Piperidine Series Thioridazine	Melleril	75	600	Drowsiness. Hypotension. Parkinsonism infrequent.	Rarely retinitis pigmentosa in very high dosage.	As tranquillo-sedative in neuroses and psychoses. Especially useful in agitated states in old age.	Little therapeutic effect in schizophrenia.
Piperazine Series Prochlorperazine	Stemetil Compazine	15	100	Extrapyramidal syndromes. Parkinsonism, dystonic syndromes and akathisia.	Skin reactions. Rarely jaundice and blood dyscrasias.	Vomiting. Tinnitus. Prevention of migraine. Schizophrenia, including inert and apathetic patients, and mania.	Dystonic reactions in higher doses.

Thiopropazate	Dartalan Dartal	15	150	As above.	Uncommon.	All types of schizophrenia Mania.	Extrapyramidal side effects frequent.
Perphenazine	Fentazin Trilafon	6	64	As above.	As above.	As above.	As above.
Trifluoperazine	Stelazine	3	30	As above.	As above.	All types of schizophrenia Mania. Low doses for anxiety symptoms.	As above.
Fluphenazine	Moditen Permitil Prolixin	0·5	10	As above.	As above.	Mainly for relief of anxiety and tension in neuroses.	As above.
					RAUWOLFIA ALKALOIDS		
Reserpine	Serspasil, etc.	1·0	15	Depression. Hypotension. Parkinsonism.	Peripheral œdema.	Schizophrenia when other drugs have failed.	Depression and hypotension can be pronounced.
Rescinnamine	Moderil	0·5	1·0	Depression and hypotension.	Nil.	As above.	As above.
Deserpidine	Harmonyl	0·1	3·0	As above.	As above.	As above.	As above.
					COMPOUNDS OF MISCELLANEOUS STRUCTURE		
Tetrabenazine	Nitoman	35	180	Drowsiness. Parkinsonism.	Nil.	Some cases of schizophrenia.	Not as effective as phenothiazines.
Haloperidol	Serenace	2	10	Extrapyramidal syndromes. Hypotension.	Nil.	All forms of schizophrenia, perhaps especially effective in mania.	Dystonic syndrome may be pronounced.
Chlordiazepoxide	Librium	15	100	Drowsiness. Ataxia.	Skin rashes.	All states of anxiety and tension.	Nil.
Diazepam	Valium	6	30	As above.	As above.	As above.	Nil.
Meprobamate	Equanil Miltown	600	2400	Drowsiness.	Skin rashes.	States of anxiety and tension.	Cases of addiction reported.
Phenaglycodol	Ultran	800	1200	Drowsiness.	Nil.	As above.	Efficacy not established.
Captodiamine	Covatin	300	400	Nil.	Nil.	As above.	Efficacy not established.
Benactyzine	Suavitil Phobex	3	9	Heavy feeling in limbs. Ataxia. Diarrhœa.	Nil.	As above.	Doubtful efficacy.
Hydroxyzine	Atarax	75	400	Drowsiness. Gastro-intestinal disturbances.	Nil.	As above.	As above.

TABLE II ANTIDEPRESSANTS

Approved Name	Trade Name	Daily Dosage (mg.)		Principal Side Effects	Principal Toxic Effects	Indications	Limitations and Disadvantages
		Low	High				
					STIMULANTS		
Amphetamine	Benzedrine	5	30	Anorexia. Insomnia.	Occasionally schizophreniform psychoses.	Some cases of mild depression.	Tolerance. Addiction.
Dexamphetamine	Dexedrine	5	30	As above.	As above.	As above.	As above.
Methamphetamine	Methedrine etc.	2·5	15	As above.	Nil.	As above.	As above.
Phenmetrazine	Preludin	25	75	As above.	Nil.	As above.	As above.
Pipradrol	Meratran	1	7·5	Insomnia.	Nil.	As above.	Tolerance. Possibly addiction.
Methylphenidate	Ritalin	10	60	Insomnia.	Nil.	As above.	Tolerance. Possibly addiction.
					MONOAMINE OXIDASE INHIBITORS		
Iproniazid	Marsilid	50	200	Hypotension. Hesitancy of micturition. Impotence.	Jaundice. Fluid retention.	Depression.	Jaundice and other side effects much more common than with other antidepressants.

Phenelzine	Nardil	30	75	Similar to Iproniazid but less pronounced.	Fluid retention. Rarely jaundice. Occasionally severe phæochromocytoma-like headaches.	Depression.	Nil.
Isocarboxazid	Marplan	20	60	As above.	Fluid retention. Rarely jaundice.	As above.	Nil.
Mebanazine	Actomol	10	30	As above. Hypotension	Probably as above.	As above.	Hypotensive effects.
Nialamide	Niamid	75	450	As above.	Nil.	As above.	Possibly less effective than other monoamine oxidase inhibitors.
Tranylcypromine	Parnate	20	60	Mild amphetamine-like effects.	Severe phæochromocytoma-like headaches with rapid rise in blood pressure.	As above.	Probably inadvisable in patients with cerebral or coronary vascular disease because of phæochromocytoma-like attacks.
Etryptamine	Monase	15	45	Hypotension.	Skin rashes.	As above.	Doubtful efficacy.
					IMINODIBENZY DERIVATIVES		
Imipramine	Tofranil	75	300	Dry mouth. Tremor tachycardia sweating, hypotension.	Skin rashes. Increased tendency to seizures. Occasional jaundice.	Depression, especially retarded and endogenous types.	Side effects common but not serious.
Desipramine	Pertofran	75	300	As above.	Probably as above.	As above.	As above.
Amitriptyline	Tryptizol Laroxyl Saroten Elavil	75	300	As above plus drowsiness.	As above.	As above.	As above.
Nortriptyline	Aventyl	75	300	As above.	Probably as above.	As above.	As above.

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